CALIFORNIA POLICY OPTIONS

UCLA School of Public Affairs
The Ralph and Goldy Lewis Center for Regional Policy Studies

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The Ralph and Goldy Lewis Center for Regional Policy Studies in the UCLA School of Public Affairs was established to promote the study, understanding and solution of regional policy issues, with special reference to Southern California, including problems of the environment, urban design, housing, community and neighborhood dynamics, transportation and economic development. It is a focus of interdisciplinary activities, involving numerous faculty members and graduate students from many schools and departments at UCLA. It also fosters links with researchers at other California universities and research institutes on issues of relevance to regional policy.

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PREFACE

The Ralph and Goldy Lewis Center's *California Policy Options* offers an unflinching assessment of the measures the State has undertaken to address its fiscal, environmental, transportation, and planning issues; the ramifications of the programs and legislation that have been implemented; and alternative proposals that could prove to be viable solutions to California's policy and planning problems.

Addressing the interrelated challenges in transportation, housing, land use, legislation, resource allocation, energy, and policy with the ubiquitous budget challenges, this annual volume exemplifies the strength of the UCLA School of Public Affairs as a nexus of thought-provoking new ideas that transcend disciplinary boundaries.

Many thanks go to Professor Daniel J.B. Mitchell for editing a volume that is both timely and provocative, giving a broad perspective on the historical policy decisions that led to our current situation, and innovative perspectives on building a sustainable future for all Californians.

Franklin D. Gilliam, Jr.
Dean
UCLA School of Public Affairs

INTRODUCTION

California faces particularly difficult issues in 2010. Some of the challenges are immediate and revolve around the state budget, dysfunction in state government, and the severe slump in the California economy. Other challenges are longer-term and involve trends in income distribution and the environment.

In the opening chapter, Cara Horowitz reviews the features and implication of SB 375, a major piece of environmental legislation enacted in 2008. The new law potentially touches on land-use planning and regulation and transportation (especially driving). While the law creates a variety of planning requirements to mitigate greenhouse gas emissions, Horowitz notes that it is unclear whether the result will be a proliferation of planning documents or actual implementation.

Michael Sandler, in his chapter, focuses on a related topic: state electricity regulation as it relates to carbon dioxide emissions. Sandler notes that efforts to reduce such power-related emissions will add costs to the typical California household electricity bill. A switch to renewable energy sources involves a higher direct cost of electricity than, say, coal-generated power. Sandler provides alternative calculations of what that cost might be.

The third chapter by Dustin Maghamfar looks at how California might encourage the use of public transit. Because of the state budget crisis, funds that might go for transit are being diverted to the general operating budget of the state. Such diversion goes against state policy aimed at reducing greenhouse gas emissions, the goal of SB 375. Maghamfar argues that price signals need to aim at making use of public transportation more attractive to Californians.

Philip Romero, in his chapter, suggests a market-based mechanism for reducing urban sprawl. He suggests that such a mechanism would be preferable to zoning mandates. His "smart district" concept would encourage higher density by giving some of the revenue generated in district back to the district itself. Romero provides estimates of the impact of adoption of the smart district concept on state economic activity and job creation.

The California legislature has been especially subject to criticisms of dysfunction and is perceived unfavorably by the public according to opinion polls. However, William Parent provides an example of a 2007 law—AB 1471—that did pass successfully through the legislative process involving gun control. His chapter provides a detailed description of the background of the proposed law and how it developed within the legislative system. The law involved use of microstamping technology, a process enabling guns to be traced more easily. Parent describes the techniques used by proponents and opponents as the bill moved through the legislature and provides insights into the workings of the state's legislative branch.

Michael Manville and Matthew Drennan describe the gap between wage income in central California relative to the more prosperous coastal regions. In the 1960s and 1970s, the trends in real wage growth in the central and coastal regions were broadly similar, although the central areas had lower real wages than the coast. Thereafter, however, the central-coastal gap began to widen. Manville and Drennan examine the usual suspects cited in explaining the growing gap—changing demographics (including immigration), industry mix, and educational attainment. They find that the locational trend in the development and shift

of the knowledge sector toward the coast provides an important explanation.

Daniel Mitchell notes that Governor Gray Davis was recalled in the midst of a major state budget crisis in 2003 and replaced by Arnold Schwarzenegger who campaigned on his ability to fix the budget. But Governor Schwarzenegger, after borrowing to deal with the Davis crisis, began to face a renewed budget crisis in late 2007. In his chapter, Mitchell analyzes the fiscal rise and fall of Governor Davis. He suggests there is an underlying economic reality that caused California to be prone to budget crises, despite the substitution one governor for the other. Mitchell notes that California had experienced particularly rapid economic growth from World War II to the end of the Cold War, growth that provided revenue for infrastructure and social programs. In a sense, California has never recovered from the recession of the early 1990s when the Cold War came to an end. The state has not adjusted to the slower growth thereafter.

One problem that has been highlighted in discussions of California's budgetary problems is the volatility of its tax sources, particularly the income tax. Jerry Nickelsburg suggests a possible solution to tax volatility. Although Proposition 13 of 1978 is often seen as a cause of California's proneness to fiscal distress, Nickelsburg suggests it could be the key to reducing tax volatility. Because Prop 13's assessment mechanism means that most property is valued below market, it has become a comparatively stable revenue source for local government. A modest increase in Prop 13's tax rate, combined with its current under-market assessment mechanism, could lead to greater state revenue stability, if the incremental revenue could be diverted to the state in a revenue-neutral fashion. In effect, the added Prop 13 revenue to the state would be used to reduce the income tax in an equivalent amount.

California is part of the larger U.S. economy and its recession—and the budget crisis the recession triggered— reflects national trends. However, as Christopher Thornberg points out in his chapter, the state has its own unique characteristics including having played a disproportionate role in the housing bubble. There were some signs of an economic turnaround in late 2009, but problems remained to be resolved including mortgage foreclosures to come. Thornberg notes that California retains important locational and other advantages. Permanent decline is not likely although a continued soft economy is probable in the near term.

Daniel J.B. Mitchell
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PLANNING AT THE INTERSECTION OF STATE AND MAIN: UPDATE ON CALIFORNIA'S SB 375

CARA A. HOROWITZ[1]

Cara Horowitz is the Andrew Sabin Family Foundation Executive Director of the Emmett Center on Climate Change and the Environment. The Emmett Center, housed at UCLA School of Law, was founded in 2008 as the nation's first law school center focused exclusively on climate change. Horowitz teaches classes on climate law and policy and directs the Emmett Center's research and advocacy.

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A little more than a year ago, with a fair amount of hoopla, California became the first state in the nation to pass a bill aimed at decreasing driving as a means to reduce greenhouse gas (GHG) emissions. Such emissions are those responsible for global warming and other forms of climate change. The state did so by taking on the complex nexus of land use, transportation, and housing. Simply put, the legislature set a course aimed at changing neighborhoods, highways, transit options, and other land-use patterns to reduce our miles on the road.

The goal was ambitious, especially for the purported home of the drive-through restaurant.[2] And it is too early to determine whether the law, known as SB 375,[3] will significantly and cost-effectively reduce greenhouse gas emissions from the transportation sector. But it has certainly garnered media attention. The law won praise from the New York Times editorial board (which called it "[t]he latest example of California's originality" and urged other states to follow suit).[4] At the other end of the spectrum, the Orange County Register called it "one of the most authoritarian, far-reaching and elitist bills that has ever made it to the Governor's desk".[5] Other media reaction ranged between these two points of view.

For land use planners, SB 375 has served as a Rorschach test. At the time of its enactment, some observers considered it the most important change in planning law since the California Environmental Quality Act (CEQA). Others saw it as providing "incremental change, not land use revolution." Opinions about its worth often reflected both varied beliefs in the utility of centralized land use planning and one's stake in the bill's creation and passage.[6]

The first few steps of SB 375 implementation have now been taken. Much has been written about the law, but this chapter provides relatively brief answers to three questions: What gave rise to the law? What does it say? And what has the first year of implementation revealed about its significance and its likelihood of success?

GRAPHING THE VMT GORILLA

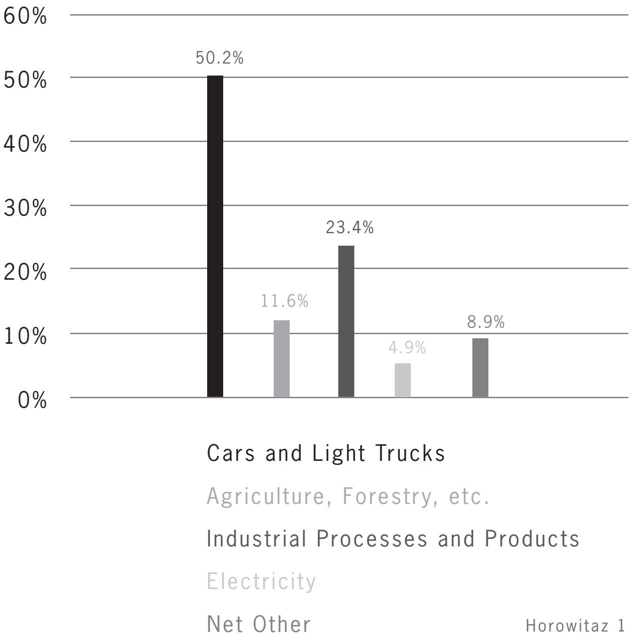
"In order to reach California's greenhouse gas reductions goals set out in the Global Warming Solutions Act of 2006 (AB 32), we must rethink how we design our communities."[7]
—California Office of the Governor

What gave rise to SB 375? In short, the state was inspired to act by a tale of two graphs and a city. The tale begins with California's passage, in 2006, of its landmark Global Warming Solutions Act, also known as AB 32. That act calls for a return to 1990 levels of state greenhouse gas emissions by the year 2020. Two initial questions were asked by the agency assigned the task of figuring out how to reach this goal, the California Air Resources Board (ARB). First, what are the main sources of our current emissions? Second, which emissions sources have accounted for the most growth in emissions since 1990, the target year?

TRANSPORTATION EMISSIONS

The answers to both questions pointed toward a high-profile emissions culprit: transportation. ARB learned that about 40% of the state's greenhouse gas emissions come from transportation sources, 30% from passenger vehicles such as cars and light trucks. Even more striking, passenger vehicles accounted for more than 50% of the growth in the state's GHGs since 1990 – the growth that AB 32 sought to erase. This damning fact —illustrated in the graph at Figure 1—appeared early in the AB 32 implementation process:[8]

Figure 1. Percent of GHG Growth 1990-2004



It made plain that returning to 1990 levels of GHG emissions would be very difficult without including significant measures to tackle transportation emissions and, in particular, passenger vehicle emissions.

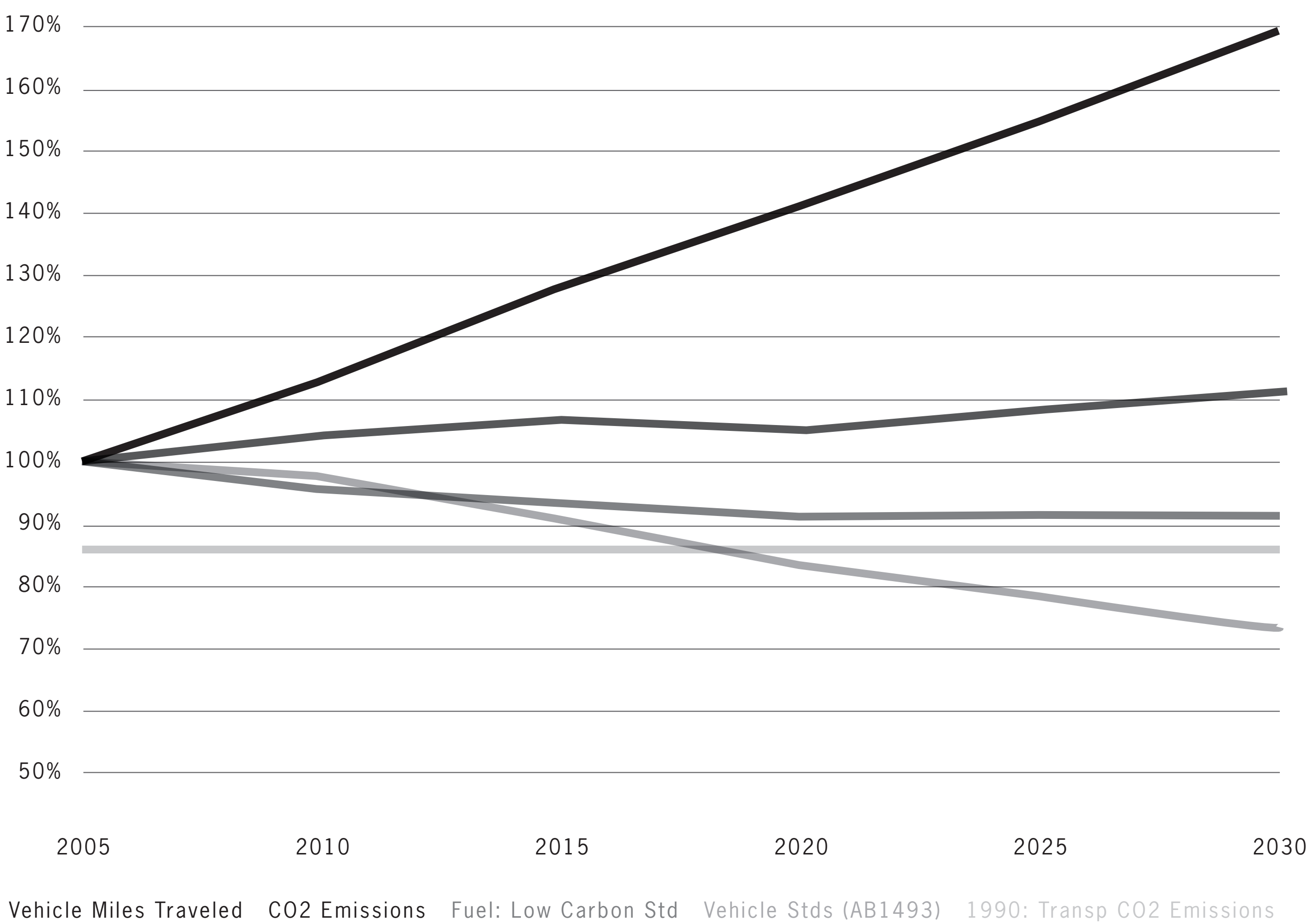
This result was no surprise. Indeed, California had already begun, even before the passage of AB 32, to design measures to reduce greenhouse gases from passenger cars. In 2002, the legislature required new, first-in-the-nation standards to lower greenhouse gas emissions from passenger vehicles to the maximum extent feasible and cost-effective. Known as the Pavley regulations (for assembly representative Fran Pavley, sponsor of the bill), the standards required improvements in vehicle efficiencies and design. These requirements included—but were not limited to —improved fuel efficiency.[9] The state also had begun work on a low-carbon fuel standard, aimed at reducing the carbon intensity of fuels used to power passenger vehicles by at least ten percent by 2020.[10]

INSUFFICIENT MEASURES

The state quickly concluded, however, that measures addressing fuel content and vehicle technology alone are insufficient to tame greenhouse gas emissions from passenger vehicles. GHG emissions from cars are a product of three variables, sometimes referred to as three legs of a stool. These variables are 1) the carbon content of fuels (GHG per gallon), 2) the design of the vehicle (determining miles per gallon and other efficiencies), and 3) the number of vehicle miles traveled (VMT). California had plans underway to address the first two of these, through the low-carbon fuel standard and the Pavley regulations. But what about the third leg of the stool, the number of miles driven?

Enter the second influential graph—Figure 2—which can be thought of as the VMT Gorilla Graph. It served to convince legislators that California had to address the third leg, too. The graph, of which there were actually several versions, was crafted by the environmental advocacy group, Center for Clean Air Policy. It was widely distributed through several channels in 2007 and 2008, including via the California League of Conservation Voters (CLCV), Natural Resources Defense Council (NRDC), and Smart Growth America. The graph was also included in an

Figure 2. Percent of GHG Growth 1990-2004



Horowitaz 2: Center for Clean Air Policy, Based on CEc, CARB and CALTRANS data

influential new book on transportation and greenhouse gases, Growing Cooler.[11]

In a visually stark way, it showed that California's projected growth in VMT—because of both population growth and growth in miles driven per person—would cause GHG emissions from passenger vehicles to rise at a rate that would outstrip our planned low-carbon-fuel-standard and Pavley-regulation advances. It would prevent California from reaching its 2020 emissions goals. VMT was simply the unstoppable gorilla in the equation, keeping CO2 emissions rising even after accounting for other measures:[12]

As the authors of Growing Cooler wrote, "The phrase 'you can't get there from here' has a new application."[13] California's passenger vehicle GHG emissions would remain well above 1990 levels in 2020 unless something was done to reduce the number of miles Californians were projected to drive. And that meant tackling land use—literally changing the structure of our communities—which for so long had been built on assumptions of cheap gas, expanding freeways and suburban growth.

REDUCING VMT: THE SACRAMENTO APPROACH

What would VMT-reducing land-use patterns look like? Ewing et al. described their vision:[14]

> *"Many more developments would look like the transit-oriented developments and new urbanist neighborhoods already going up in almost every city in the country, and these developments would start filling in vacant lots or failing strip shopping centers, or would revitalize older town centers, rather than replacing forests or farmland. Most developments would no longer be single-use subdivisions or office parks, but would mix shops, schools, and offices together with homes. They might feature ground-floor stores and offices with living space above, or townhomes within walking distance of a retail center."*

This statement reflected a vision of compact development that had been around for a while, but the fight to reduce GHG was giving it new life.[15]

So, too, was the experience of the most influential city in the SB 375 tale, Sacramento. In 2004, the greater Sacramento region undertook a project to coordinate local governmental planning decisions. With coordination, they all might be guided, for the first time, by a larger, voter-approved vision for growth in the region. Called the Blueprint project and led by the Sacramento Area Council of Governments (SACOG), a regional planning organization, the project aimed to curtail the sprawl pattern developing around the state's capitol.[16]

SACOG crafted, through extensive public involvement, several options for "growth alternatives" and asked county residents to vote on those options. Ultimately, SACOG adopted a regional blueprint that "provided the same number of housing units and jobs, and served the same population" as did the business-as-usual scenario, yet with a much smaller urban footprint.[17] Development would be constrained to areas close to the urban core, transportation options would be improved, and congestion would be reduced.

More importantly for this story, VMT would be reduced, too—as much as 25% per household by 2050, according to ARB, largely due to more compact development and improved transit.[18] Sacramento had provided a blueprint for the state just at the right time, illustrating how planning that reduces miles travelled could be politically palatable and provide significant ancillary benefits. State senator Darrell Steinberg,

SB 375's author, emphasized early and often that the bill simply called for:

> *"a process similar to a process pioneered in [his] region of Sacramento, known as "the blueprint," which essentially says that we need to plan as a region, not just as individual cities and counties. Air quality, traffic congestion, and carbon know no artificial boundaries. These issues must be tackled regionally. . . . SB 375, again, does not impose any particular vision on any region. It says, 'We want you to do what SACOG has done so successfully.'"*[19]

It certainly didn't hurt that the successful Sacramento model was playing out in legislators' front yards. Having seen both the need for a land-use GHG bill and a path to success, the legislature was primed to act.

THE "IMPOSSIBLE COALITION"

Though the global warming crowd and key legislators were convinced of its necessity, winning passage of SB 375 was not easy. Its success ultimately depended on bringing together, and holding together, interest groups that had been at loggerheads for decades. In the past, there had been collisions over housing, transportation, and CEQA issues, involving the building industry, environmental groups, local governments, and affordable housing advocates. The disparate grouping of supporters attracted by the bill was, in late summer 2008, seemingly held together with package twine and was dubbed by many the "impossible coalition."

Environmentalists, including the California League of Conservation Voters and NRDC at the fore, had historically been loathe to lessen CEQA requirements for large developments. But they were willing to do so to get strong greenhouse gas targets tied to regional transportation planning requirements. The building industry, according to Ray Becker, chairman of the California Building Industry Association, had spent three decades fighting "regional planning and regional government." But it endorsed the bill after concluding that "we cannot continue to do business as usual."[20] The industry was wooed, in part, by the potential for streamlined CEQA approvals.[21]

The California League of Cities and other local and regional governmental representatives initially opposed the bill. But they lobbied hard for amendments to ensure it would not restrict local authority or, importantly, access to transportation funding.[22] Having won those and other amendments, the League came around in the last weeks of debate to endorse it unanimously.[23] In Senator Steinberg's words, this was "the first time in the country that the issues of land use, transportation, housing and climate change ha[d] been brought together in a comprehensive piece of legislation."[24] SB 375 passed and was signed into law in September 2008.

WHAT SB 375 SAYS

"SB 375 does both less and more than you think."[25]
—Bill Higgins, legislative representative,
League of California Cities

The central goal of SB 375 is to reduce greenhouse gas emissions from passenger vehicles by reducing VMT below business-as-usual projections. It aims to achieve this goal by requiring regional planners to envision and set forth a strategy for how such GHG reductions could be achieved in their region. Then it provides incentives for on-the-ground land use decisions to match the regional plan. As many observers have noted, the bill contains no mandates that might control the outcome of any particular land use, housing, or

transportation decision.[26] At its heart, SB 375 is a planning tool.

As the first step, the law requires the California Air Resources Board, the same state agency charged with implementing AB 32, to give each of California's 18 pre-defined planning regions a numerical target for reducing their passenger vehicle GHG emissions. How that target is set, and what it is likely to look like, is discussed below. ARB is charged with announcing these regional targets by September 2010.

From there, regional planning bodies—called metropolitan planning organizations or MPOs—take their GHG reduction target and craft a land-use and development plan of their choosing. The plan, if implemented, must meet the target, taking into account projected growth, housing needs, and natural resources and farmland. The resulting plan is called a Sustainable Communities Strategy (SCS). It is at the heart of SB 375. For reasons made clear below, the bill requires that the Sustainable Communities Strategy be incorporated into the region's periodic Regional Transportation Plan. Regional Transportation Plans are preexisting planning requirements undertaken by each MPO every four years or so. These plans derive from federal law.[27]

CONTENTS OF A SUSTAINABLE COMMUNITIES STRATEGY

What sorts of measures might be included in a Sustainable Communities Strategy? There are many determinants of VMT, including housing and commercial development choices such as the density, diversity, and location of new construction. In addition, there is the availability and convenience of alternative transportation (such as public transit, carpool/vanpool choices, and bike lanes) and pricing signals (gas prices, congestion pricing, parking costs).

SB 375 gives each region the flexibility to design a plan to meets its GHG target through any combination of measures affecting these or other factors. One region might adopt an urban growth boundary, hike parking fees and improve bike paths. Another might build new light rail to serve outlying regions and impose congestion pricing to discourage car commuters. The sole requirement is that the state, through ARB, review the plan and agree that it would, if implemented, achieve the regional GHG target.

Once the plan is approved and in place, nothing requires the MPO, local governments, developers, or anyone else to follow its contours. Such laxity was necessary for passage of the bill. But incentives kick in which are designed to make projects that are consistent with the plan look more attractive than those that are not.

INCENTIVES TO COMPLY

First, federal transportation funding is available only for projects consistent with a Regional Transportation Plan—including the new Sustainable Communities Strategy element.[28] As explained by the bill's sponsors, NRDC and CLCV, "[b]y placing the SCS inside the regional transportation plan, transportation funding becomes a powerful incentive for its implementation."[29] Second, certain residential and mixed-use developments that are consistent with the regional plan are offered exemptions from select environmental review requirements under the California Environmental Quality Act.

For example, some developments need not include an analysis of growth-inducing impacts or impacts on global warming from project-related car trips.
A smaller, more carefully selected group of high-density projects near transit stops need only complete an environmental assessment (EA), not a full environmental impact statement (EIS). And a very narrow class of projects escape CEQA review entirely.[30] These CEQA incentives may be attractive to developers and local governments now that the California Attorney General's office has stepped up enforcement of CEQA requirements related to global warming. Over time, the theory goes, such incentives will slowly change the structure of a community so as to reduce VMT.

THE FEASIBILITY ISSUE

But what if a region concludes that meeting the GHG reduction target set by ARB is simply infeasible, given realistic travel forecasts or constraints on the region's funding, land-use authority, or ability to impose fees? What if the region believes it can't realistically get the job done? In that case, the region must prepare a standalone document called an Alternative Planning Strategy (APS). In an APS, regions must identify the main impediments. They must then show what alternative development patterns, increased transit programs, or other policies would—if impediments were overcome—accomplish the GHG goal.

The decision about whether it is "feasible" to meet ARB's targets is left largely to the discretion of each MPO. And that decision appears to matter greatly. Although both Sustainable Community Strategies and Alternative Planning Strategies provide CEQA incentives to projects consistent with them, only an SCS is formally part of the transportation plan. Only an SCS, therefore, is tied to transportation funding mechanisms in a way that funnels federal funding to "good" projects and, just as importantly, limits federal funding for projects inconsistent with its vision.

How many MPOs adopt Sustainable Communities Strategies that meet their GHG reduction targets in this first round of SB 375 compliance is an open, and important, question. Both forms of the required regional plan, of course, serve to chart a concrete path toward communities in which people drive less—potentially helping build political will to follow that path. Each region, for the first time ever, will have harmonized its transportation growth plans, housing growth plans, and greenhouse gas reduction plans into one comprehensive strategy.

IMPLEMENTATION SO FAR

A year after passage, the state has met its statutory deadlines for implementation. But much still remains to be done. As required by SB 375, an advisory board consisting of wide-ranging stakeholders was convened in early 2009 to assist the ARB. It included representatives of local governments, environmental groups, developers, transportation agencies, housing advocates, and others. The board, called the Regional Targets Advisory Committee (RTAC), was given the task of recommending "factors to be considered and methodologies to be used" by ARB in setting regional GHG reduction targets. It held discussions for about 8 months and issued its final report on September 30, 2009.[31]

Key recommendations of the report include:

1. That ARB's regional targets be expressed as a percent per-capita GHG emission reduction from a 2005 base year. This metric, the committee concluded, would appropriately account for differences in growth rates among regions. It

would require the greatest changes in regions with the highest per capita emissions.

2. That ARB choose targets based on a statewide uniform target. But that it allow for adjustments up or down for each region, depending on regional differences (such as transit infrastructure).
3. That chosen targets be "the most ambitious achievable" for each region and "not be set low simply to allow MPOs to meet their targets with the SCS."[32]
4. That the state quickly develop a spreadsheet tool for "Best Management Practices" (BMP). This tool would list available land-use and transportation policies and practices and associated VMT reductions, to assist ARB and the regions in their planning.
5. That the state take steps to secure increases in funding for transit and transportation planning.

DISAGREEMENTS

Potentially even more illuminating than its final recommendations, however, are the debates RTAC had as a committee and the points on which it could not agree. Much of the committee's time was spent assessing available travel demand models, the modeling capabilities of the state's 18 MPOs, and the extent to which use of those models should be required for all MPOs in implementing the bill. The committee agreed that its assessment revealed significant variations among the models being used and the capacities of MPOs to employ them. It also agreed on the need to "augment" travel demand models with other methods to inform choices under SB 375, such as the Best Management Practices tool described above.[33] It could not agree, however, on whether MPOs should have the choice of relying solely on BMP tools, rather than travel demand models, to assess compliance with the ARB target.[34]

The disagreement reflected a fundamental division between committee members and, in some, perhaps ambivalence about the entire project of judging land-use decisions based solely on their ability to reduce GHGs. To some, the purpose of SB 375 is to create better transit, more compact neighborhoods, and other on-the-ground changes to development patterns. So why not permit regions to declare success once they can show a plan that adopts these best land use practices and on-the-ground changes—even without a model capable of predicting resulting GHG reductions?

What more should the state be asking for beyond the embrace of best practices, in the view of some committee members, especially from smaller MPOs? Others, especially those who had witnessed the success of the model-driven Sacramento Blueprint Project, believed that a list of best practices would be no substitute for calculations of the amount of GHG reductions actually achieved over time. Unable to agree on a recommendation on this point, the RTAC sent the question on to ARB.[35]

UPCOMING DEADLINES

The next implementation steps will be critical. Under the plan recommended by RTAC, each region will gather data and work cooperatively with ARB to suggest its own regional target by March 1, 2010.[36] ARB then must propose draft regional targets by June 30, 2010 and decide on final targets by September 30 of that year. San Diego will be the first region to attempt to prepare a Sustainable Communities Strategy, for inclusion in its Regional Transportation Plan slated to be adopted in July 2011. Other regions, including Southern California, will follow closely behind.

OPEN QUESTIONS AND POTENTIAL BARRIERS

"If we want to do this stuff, we've got to figure out how to pay for it."[37]
—Gary Gallegos, RTAC member and executive director of the San Diego Association of Governments

Given these developments, what did the first year of implementation indicate about SB 375's significance and its likelihood of success? There are at least two potential speed-bumps (or even roadblocks) to success. The first and most important obstacle concerns the effect of the state's budget woes. The second is the nature of Southern California.

THE STATE BUDGET CRISIS

It is clear from RTAC's deliberations that current planning models do not yet provide realistic projections of VMT reductions from land-use and transportation changes. Many of the state's MPOs do not have the data, expertise, or manpower to employ these models.[38] Money will be needed to improve models and to design "best management practice" tools such as those recommended by RTAC.

Money will also be needed to employ the planners necessary to create accurate regional forecasts and translate them into project approvals. Finally, funding is needed to ramp up transit projects to support envisioned smart growth developments.

But since SB 375 was passed, California has struggled mightily to balance its budget and has raided local and regional coffers and transit funding in an attempt to do it. It has taken nearly $2 billion from the State Transit Assistance program since 2007, essentially defunding that program over a three year period.[39] And municipalities, counties, and regional organizations have all been squeezed. At this writing, litigation over such raids is ongoing.[40]

The effects of the state budget crunch on local planning departments, in particular, have been dramatic. These departments are where regional plan theory meets project approval practice. They are where much of the work of implementing Sustainable Communities Strategies will take place.

In the last year, Sacramento County proposed a $900,000 cut from its planning department, the equivalent of more than six full-time positions.[41] The City of Petaluma is reported to be disbanding its planning department entirely, laying off all remaining planners and its development director after reducing from 23 to 11 employees.[42] And the visionary Los Angeles City Planning Director Gail Goldberg has reduced her staff by a third and imposed furloughs on nearly all who remain. The consequence, in her words, is that "[l]ong-range policy work has stopped or slowed."[43]

Unless the SB 375 mandate is followed with money, it won't yield the results desired. There are a few mechanisms underway, or being considered, to improve funding for planning. A bill was passed by the legislature in fall 2009, sponsored by the California Association of Councils of Governments. SB 406 would have permitted regions, county transportation commissions, and specified air regions to impose up to a $2 surcharge on vehicle registrations. The surcharge would pay for models, planning staff, and other planning expenses related to reducing VMT. If each agency adopted at $2 fee, it was expected to generate about $63 million per year.[44] But on October 12, to

the dismay of many environmentalists and planning advocates, Governor Schwarzenegger vetoed the bill, objecting to any new motor vehicle fee.

Some funding is still available through Proposition 84 and the state's Strategic Growth Council. The Council has set aside $12 million to assist in SB 375 implementation and model development, with $10 million going directly to MPOs. But the money won't go nearly far enough. Twelve MPOs have already submitted applications for Prop. 84 funding that, if granted, would deplete the fund entirely.

Transit funding is similarly precarious. As the RTAC put it,

> *"California's continued trend of eliminating state sources of transit capital and operating funds presents an implementation dilemma. Without restoration of state sources of transit funding that are reliable and long term, it will be unrealistic for transit to meet any increased demand in services. This will diminish the state's ability to achieve its greenhouse gas emission reduction goals. The Committee urges the state to address this discontinuity between the elimination of state transit funding in its budget and the mandates of SB 375."* [45]

There are a few bright spots. At the height of fears about the recession, in November 2008, more than two-thirds of the voters in Los Angeles, Marin-Sonoma, and Santa Clara counties approved tax increases to fund transit projects. Voters statewide approved a bond-financed high speed rail project. But given the state's ongoing fiscal crisis, it remains unclear whether, and when, it may be able to provide more money for SB 375 efforts—without which the success of the bill is highly uncertain.

SOUTHERN CALIFORNIA

"I have a board of 84 elected officials actually, and I would say 99 percent of them didn't like the bill. They didn't want anything to do with it. It's not just because they didn't want to do the right thing. It's because they didn't understand it. I just want to make a couple of points. I don't think 375 should be considered a global-warming bill. I don't think it's the most cost-effective way to reduce greenhouse gas emissions." [46]
—Hasan Ikhrata, executive director of the Southern California Association of Governments

After funding, the second obstacle to successful implementation of SB 375 is, in a phrase, Southern California. The Southern California region is both the most important for SB 375's success and the most troubling, and the last year has done little to suggest a way around its troubles.

It is the most important because of its size and its relative contribution to statewide GHG emissions from passenger vehicles. The region, whose MPO is the Southern California Association of Governments (SCAG), is home to nearly half the state's population and covers six counties. All of these counties are expected to grow significantly by 2030: Los Angeles, Orange, Imperial, San Bernardino, Riverside, and Ventura.[47] It is far larger in area than any other California MPO—larger, in fact, than Indiana and twelve other states.

Southern California is also a huge contributor to VMT and, therefore, to passenger vehicle GHG emissions. Alone, the SCAG region generates nearly 50% of the total statewide passenger vehicle miles driven. Although ARB's regional targets will not be set until fall 2010, SCAG expects that its region will be "required to take about half the reduction in the

state."[48] Thus, if SCAG doesn't make the changes that are necessary to reduce miles driven, it will be hard for California to reach its GHG reduction goals from the passenger vehicle sector.

But SB 375 implementation is more difficult in SCAG's region than perhaps anywhere else. In addition to being large, SCAG is also politically divergent and complex. It represents 189 separate cities and five county transportation commissions. SCAG operates under the often-unwieldy direction of a Regional Council made up of more than 80 elected officials from 67 districts within the region. [49] To say that it faces conflicting mandates and political pressures is an understatement. It is difficult to see how SCAG might reconcile these conflicts to create a single, palatable regional plan for reducing GHGs.

Recognizing SCAG's unique complexities, the law makes some adjustments in its requirements for SCAG regional planning. Alone among MPOs, it is permitted to devolve some of its planning work to sub-regions, allowing local councils of government (at their option) to work with the county transportation commission to propose a plan for their sub-regional area.[50] In addition, the RTAC report recommends that SCAG be given an extra sixty days, until April 30, 2010, to put together its proposed regional target for consideration by ARB.

However, early signs indicate that SCAG will, indeed, struggle to win widespread support for any meaningful regional plan, whether that plan originates with the MPO, the sub-regions, or some combination of the two. It floated a conceptual land-use plan last May, a sort of Sustainable Communities Strategy trial balloon. The SCAG plan concentrated development on a half-million acres of land near rail, bus rapid transit, and local bus lines. The plan wasn't nearly aggressive enough, and would have achieved only 60% of the region's likely SB 375 target—but local officials still balked.[51] They not only reacted negatively to the trial balloon, they also openly questioned SB 375's premise. From their viewpoint, GHG reductions should be achieved through cleaner fuels and energy efficiency instead.[52]

Strong SCAG leadership, committed to the SB 375 vision and process, might still save the day. But as the quote above attests, SCAG Executive Director Hasan Ikhrata himself occasionally doubts the wisdom of changing land-use and transportation patterns for the purpose of reducing GHG emissions. Like some of his board members, he may prefer that GHG reductions be found elsewhere.[53] Perhaps his doubts will make him the perfect ambassador to his unwilling sub-regions. Only time will tell.

ACHIEVEMENT OR JUST PAPER-SHUFFLING?

"[A] lot of people will do a lot of paper-shuffling in an attempt to meet the bureaucratic requirements of SB 375. But on the ground, using land use strategies to reduce greenhouse gas emissions from the burning of transportation fuels means one thing: Figuring out how to lay out California in such a way that people drive less."[54]

—Bill Fulton, land-use author and
Deputy Mayor of the city of Ventura

Even if planning efforts are properly funded throughout the state; even if money is made available for transit; even if Southern California manages to garner support from its sub-regions for a Sustainable Community Strategy; and even if all other questions about bill implementation are answered favorably - what then? To what extent will the "paper-shuffling" required by the SB 375 actually result in changes on the ground and, ultimately, reductions in driving?

Whether SB 375 will lead to real achievement will depend on at least three things. First, there is the issue of whether the law's incentive structure will work to spur compact housing development. It might turn out that CEQA exemptions are not nearly enough to entice builders into compact infill projects. A host of other structural and political barriers may make those projects very difficult despite the exemptions.[55]

Second, it is unclear if the bill's varied incentives will work well together. Sustainable Community Strategies are holistic plans, with parts dependent on each other for success (increased housing built near improved transit lines, for example). Incentives, however, operate project by project. What if the bill succeeds in spurring high-density development along transit corridors proposed for expansion, but the dollars to make that transit expansion a reality never come?

Third, and last, it remains to be seen how influenced people are by being shown what is possible. Part of the impetus for the bill might best be described as hope: *if we envision it, they will come*. Whether that hope is justified will not be apparent for many years.

APPENDIX: GLOSSARY OF ABBREVIATIONS

AB = assembly bill

APS = Alternative Planning Strategy

ARB = (California) Air Resources Board

BMP = best management practice

CALTRANS = California Department of Transportation

CARB = see ARB

CEC = California Energy Commission

CEQA = California Environmental Quality Act

CLCV = California League of Conservation Voters

CO2 = carbon dioxide

EA = environmental assessment

EIS = environmental impact statement

GHG = greenhouse gas

MPO = metropolitan planning organization

NRDC = Natural Resources Defense Council

RTAC = Regional Targets Advisory Committee

SACOG = Sacramental Area Council of Governments

SB = senate bill

SCAG = Southern California Association of Governments

SCS = Sustainable Communities Strategy

VMT = vehicle miles traveled

ENDNOTES

1 The author is the Andrew Sabin Family Foundation Executive Director of the Emmett Center on Climate Change and the Environment at UCLA School of Law. She thanks Todd Garber and Jesse Swanhuyser for helpful research assistance.

2 An In-n-Out Burger restaurant in Baldwin Park that opened in 1948 is often cited as the first drive-through restaurant in the country (see, e.g., Wikipedia's entry on drive-throughs at http://en.wikipedia.org/wiki/Drive-through), though In-n-Out itself claims only that it was the first in California. See In-n-Out History webpage (http://www.in-n-out.com/history.asp).

3 Cal. Gov't Code § 65080 et seq. (text available at http://www.leginfo.ca.gov/pub/07-08/bill/sen/sb_0351-0400/sb_375_bill_20080930_chaptered.pdf)

4 "Cut the Sprawl, Cut the Warming," *New York Times* (Oct. 6 2008).

5 "Hot Air Gets Priority Over Housing," *Orange County Register* (Oct. 8 2008).

6 Bill Higgins, Legislative Representative of the League of California Cities, used the "Rorschach test" formulation in a speech on SB 375 given at the 23rd annual UCLA Land Use Law and Planning Conference in Los Angeles (held on January 23, 2009). For divergent views on the bill's likely significance, see William Fulton, "SB 375: Legislation Provides Incremental Change, Not Land Use Revolution," *California Planning & Development Report* (Nov. 2008).

7 "Senate Bill 375: Redesigning Communities to Reduce Greenhouse Gases," Office of the Governor (October 1, 2008) (available at http://gov.ca.gov/fact-sheet/10707/).

8 California Air Resources Board, 1990-2004 *GHG Inventory* (Nov. 2007).

9 Long and hard-fought delays in securing the federal Clean Air Act "waiver" necessary to implement the Pavley regulations were resolved only when the incoming Obama administration changed federal policy. It both granted California its waiver and is largely incorporating the Pavley regulations into a nationwide mandate for cleaner cars.

10 See California governor's Executive Order S-01-07 (Jan. 18, 2007).

11 Reid Ewing, et al., Growing Cooler: The Evidence on Urban Development and Climate Change (2007). A version of this graph appears on page 3.

12 This version of the graph is from a PowerPoint presentation emailed to the author in early 2009 by Tom Adams of the California League of Conservation Voters, and put together jointly by CLCV and NRDC. See also *Tom Adams et al*., "Communities Tackle Global Warming: A Guide to California's SB 375" at 9 (2009) (published by NRDC and California League of Conservation Voters). A more recent version of the graph has been crafted to take account of the newly proposed federal greenhouse gas emissions standards for cars. It likewise shows CO_2 emissions well above 1990 levels in 2020, due to VMT growth. See Steve Winkelman et al., "Cost-Effective GHG Reductions through Smart Growth & Improved Transportation Choices," 2009 (published by the Center for Clean Air Policy).

13 Reid Ewing *et al*., supra note 11, at 1.

14 *Id*. at 8.

15 For a discussion of some of California's prior attempts to achieve more compact land use, see John Darakjian, "SB 375: Promise, Compromise and the New Urban Landscape," *27 UCLA J. Envtl. L. & Pol'y* 371, 380-383 (2009).

16 See generally "Sacramento Region Blueprint Transportation/Land Use Study, Special Report: Preferred Blueprint Alternative" (June 2007) (available at: http://www.sacregionblueprint.org/sacregionblueprint/the_project/BP_Insert_JUN_2007.pdf).

17 Tom Adams *et al*., "Communities Tackle Global Warming: A Guide to California's SB 375" at 10 (2009).

18 Presentation of Kurt Karperos, chief of the Air Quality and Transportation Planning branch of the Air Resources Board, at a Senate staff briefing in Washington, D.C. (Sept. 25, 2009).

19 Interview with Sen. Darrell Steinberg in "SB 375 Connects Land Use and AB 32 Implementation," *The Planning Report* (July 2007) (available at: http://www.planningreport.com/tpr/?module=displaystory&story_id=1257&format=html).

20 A. Rojas, "Foes Back Anti-Sprawl Measure", *Sacramento Bee* (Aug. 7, 2008).

21 *Id*.

22 See Bill Higgins, "Technical Overview of SB 375" at 94 (Oct. 2008), appended to the League of California Cities' 2008 Legislative Report.

23 A. Rojas, "Foes Back Anti-Sprawl Measure", Sacramento Bee (Aug. 7, 2008).

24 *Id*.

25 Bill Higgins, Legislative Representative of the League of California Cities, speaking at the 23rd annual UCLA Land Use Law and Planning Conference in Los Angeles (January 23, 2009).

26 *See, e.g*., Bill Fulton, "Bureaucratic Compliance with SB 375 May Not Reduce Driving," *California Planning & Development Report* (July 1 2009). For more detailed descriptions and analyses of SB 375's provisions, see Tom Adams *et al*., "Communities Tackle Global Warming: A Guide to California's SB 375" (June 2009); John Darakjian, "SB 375: Promise, Compromise and the New Urban Landscape," *27 UCLA J. Envtl. L. & Pol'y* 371, 380-383 (2009); Alexandra Lampert, "California's Fight Against Global Warming: Finally Getting Smart About Sprawl?" 20 Stan. L. & Pol'y Rev. 193 (2009); and Bill Higgins, "Technical Overview of SB 375" (Oct. 2008), appended to the League of California Cities' 2008 Legislative Report.

27 *See 23* U.S.C. § 134(i). SB 375 also realigns regions' periodic housing forecasts to be more consistent with its transportation planning cycle. The realignment allows regions to consider these interrelated questions, using the same data, in a coordinated fashion.

28 23 U.S.C. § 134(j)(3)(C).

29 Tom Adams et al., "Communities Tackle Global Warming: A Guide to California's SB 375" at 19 (June 2009).

30 See Higgins, supra note 26, for a detailed discussion of these CEQA exemptions.

31 "Recommendations of the Regional Targets Advisory Committee (RTAC) Pursuant to Senate Bill 375" (Sept. 30, 2009).

32 *Id*. at 27.

33 *Id*. at 17.

34 *Id*. at 6.

35 *Id*.

36 The exception is SCAG, which has until April 30, 2010 to suggest a regional target to ARB.

37 Quoted in Paul Shigley, "State Funding Doesn't Match GHG Goals, Committee Says," *California Planning & Development Report* (July 29 2009).

38 See RTAC Final Report, supra note 31, at Appendix A.

39 "State Transit Assistance (STA) Program Funding Allocations and Diversions: FY 2007-08 through FY 2009-10" (California Transit Association). However, on October 1, 2009, the California Supreme Court denied the appeal of a decision holding these diversions from transit budgets to be illegal. *See Shaw v. Chiang*, 175 Cal.App.4th 577 (2009). The immediate effect of that decision on available transit funds is still unclear, but it will undoubtedly be helpful to those advocating for better transit.

40 *Id.*

41 "Sacramento County Cuts," *Sacramento Bee* (Aug. 26, 2009).

42 Paul Shigley, "Petaluma Disbands its Planning Department," California Planning & Development Report (May 5, 2009).

43 Paresh Dave, "Thousands of City Employees Still at Risk in Budget Negotiations," *Neon Tommy* (available at http://blogs.uscannenberg.org/neontommy/2009/09/post-25.html#).

44 Legislative analysis of SB 406 (available at http://www.leginfo.ca.gov/pub/09-10/bill/sen/sb_0401-0450/sb_406_cfa_2090916_155934_sen_floor.html).

45 RTAC Final Report, supra note 31, at 34.

46 Quoted in "SB 375: Changing California's Transportation and Planning Future," The Business Press (June 1, 2009).

47 "SCAG General Fact Sheet" (available at http://www.scag.ca.gov/factsheets/pdf/2009/SCAG_Factsheet_0509.pdf).

48 Bill Fulton, "Proposed SCAG Plan Falls Short of Likely SB 375 Target," *California Planning & Development Report* (May 11 2009).

49 See "SCAG General Fact Sheet" (available at http://www.scag.ca.gov/factsheets/pdf/2009/SCAG_Factsheet_0509.pdf); "Governing Structure" (available at http://www.scag.ca.gov/structure.htm).

50 Cal. Gov't Code § 65080(b)(2)(C).

51 Bill Fulton, "Proposed SCAG Plan Falls Short of Likely SB 375 Target," *California Planning & Development Report* (May 11 2009).

52 *Id.*

53 See also Louis Amestoy, "New Law Puts Compact Development Into Focus," *The Business Press* (June 1, 2009) (quoting Mr. Ikhrata as saying "I don't think [SB] 375 should be thought of as a global-warming bill. I don't think it's the most cost-effective way to reduce greenhouse gas emissions. . . . I believe we lost a lot by muddying the water and saying we're going to reduce two tons of greenhouse gas emissions with a land-use bill.").

54 Bill Fulton, "Bureaucratic Compliance with SB 375 May Not Reduce Driving," *California Planning & Development Report* (July 1 2009).

55 For an analysis of structural barriers to infill development and policy recommendations on how to overcome them, see Ethan Elkind, "Removing the Roadblocks: How to Make Sustainable Development Happen Now" (August 2009) (available at https://cdn.law.ucla.edu/SiteCollectionDocuments/missing%20files/removing%20the%20roadblocks%20--%20august%202009_final.pdf).

2

CARBON COSTS AND HOUSEHOLD ELECTRICITY EXPENDITURES IN CALIFORNIA

MICHAEL J. SANDLER

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Once people are satisfied that climate change is real and something should be done about it, they want to know, "What do we have to do, and how much is it going to cost?" This chapter begins to answer the second part of that question. It examines a $15/ton cost on carbon dioxide (CO_2) to household electricity bills in California, based on research conducted with support from the Lewis Center for Regional Policy Studies at UCLA. Although carbon pricing is an important economic lever in the economy-wide transition away from fossil fuels, the chapter concludes with a brief discussion of policies for returning revenues to consumers as a dividend, tax rebate, or share in order to assist households with the short-term costs of capping carbon.

MOVING AWAY FROM FOSSIL FUELS

Climate change policies that shift economic production and consumption away from fossil fuels over the next few decades may produce a net economic gain over time. They could do so by increasing energy efficiency, by creating new jobs in industries such as renewable energy, and by avoiding the enormous costs of catastrophic climate instability. However, climate change legislation is also expected to add short-term costs to the utilization of fossil fuels including coal and natural gas used to generate electricity and transportation fuels.

This chapter estimates the increase to the average California household's annual electricity bill if a $15 per ton CO_2 cost had been applied retroactively to coal and natural gas prices in 2005. The results are based on projections of a carbon cost's effect on coal and natural gas prices from a model developed at MIT. Also projected is the contribution to California's carbon costs resulting from the carbon-intensive, coal-fired electricity that is generated in the neighboring states of Oregon, Nevada, Utah, Arizona, and New Mexico and imported into California.

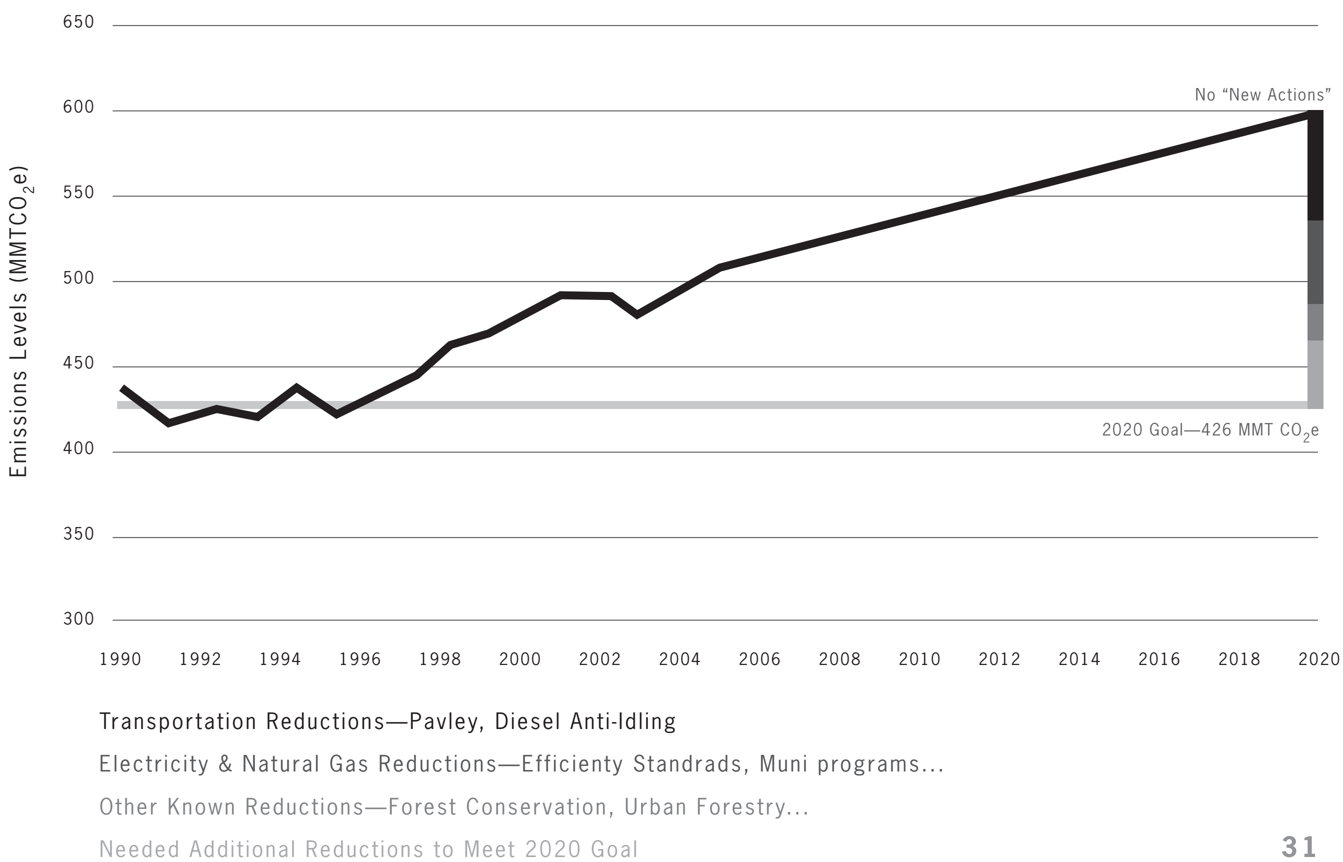
Although climate change is global in scope, there are numerous reasons why a state-level analysis of carbon costs is important. Federal climate laws must pass through the U.S. Senate, where senators will be primarily concerned with how such legislation will affect their state in particular. National estimates overlook differences between states in the amount of fossil fuel in their electricity mix, their historic investment in end-use efficiency, and in climatic factors that drive heaters and air conditioners. Even after a federal law is passed, states will continue to play an important role in climate policy.

Several states have adopted carbon emission reduction goals and climate action plans, including California, the northeastern states, and others. Electricity policy, Renewable Portfolio Standards, public goods charges for energy efficiency, state gas taxes, and some fuel composition and air quality requirements are set at the state level. States have the ability, and are the most likely entities, to create policies to assist vulnerable populations within their jurisdictions. As a leader in state-level climate policy, California will likely see a carbon cost as a result of its landmark climate legislation, AB32.

CALIFORNIA AND AB32

AB32, California's Global Warming Solutions Act of 2006, sets a statewide greenhouse gas emission reduction goal of returning emission levels to 1990 levels by 2020.[1] AB32 authorized the California Air Resources Board (CARB) as the lead agency to implement the Act. The Climate Action Team's 2006 report estimates that the Act must reduce statewide emissions by 174 million metric tons of carbon dioxide equivalent emissions ($MMTCO_2E$) from a projected business-as-usual scenario by 2020.[2]

Figure 1. California's CO_2 Emission Reduction Strategies Graphic from http://www.climatechange.ca.gov/ab32/index.html



SCOPING PLAN

The California Air Resources Board (CARB) adopted a Scoping Plan for AB32 implementation in December 2008, which describes policies to achieve GHG emission reductions between 2010 and 2020.[3] The Scoping Plan describes dozens of regulatory and market mechanisms to reduce the emissions from the transportation, electricity, industrial, and other sectors. Some of the policies include expansion of energy efficiency programs and building and appliance standards, expansion of the Renewables Portfolio Standard to 33 percent, California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard, and targeted fees to fund the State's long-term commitment to AB32 administration.

Although the Plan mentions these and other policies, it is written as an overview. As such, it does not provide specific timelines or detailed policy analysis. Perhaps most pertinent to a discussion of carbon costs is the proposed development of a California cap-and-trade program that links with other jurisdictions in the Western Climate Initiative (WCI) to create a regional market system in greenhouse gas emissions.

CAP AND TRADE

The phrase "cap and trade" refers to a tradable permit system that allows regulated firms to decide how to comply with an emissions limit, choosing either to reduce emissions to a specified level or to buy permits from other firms that have reduced beyond compliance. Supporters cite the precedent of the 1990 Clean Air Act Amendments' market for sulfur dioxide (SO_2) in helping to reduce acid rain. Theoretically, distributing tradable permits allows for more cost-effective emission reductions.

Cap and trade also has detractors, including economists who believe that a more transparent carbon price could be achieved through a carbon tax. In addition, some environmental justice advocates are wary of the complex rules that could disproportionately impact certain communities. Previous cap and trade systems have come under scrutiny from analysts who have detailed shortcomings of the design of the European Emissions Trading Scheme (ETS).

In 2007, to help sort out the intricacies of the design of a cap and trade system, the California Environmental Protection Agency appointed a panel of economists and experts to a Market Advisory Committee (MAC), which produced a report that was later referenced in the Scoping Plan. The Scoping Plan reiterated many of the MAC's recommendations, but left unanswered the formula for allocation and specifics about the use of revenue collected from auctioning permits. It also noted that the Western Climate Initiative (WCI) is also developing market design principles and guidelines for several Western states.

To continue this work, in April 2009, Governor Schwarzenegger announced the formation of another expert panel, the Economic and Allocations Advisory Committee (EAAC). EEAC was to be comprised of some former MAC members and others. Its report will review CARB's previous estimates of the economic impact of meeting AB32's goals, and also inform the market design, especially methods and formulas for allocating emission allowances under the cap. Assuming that Californians will face a carbon cost from these activities (this assumption is laid out in more detail below), how would such a cost affect household electricity bills?

ASSUMPTIONS

The analysis below relies on numerous assumptions. First, carbon costs could reach households in several ways: through a carbon tax, through a cap and trade

system, or through costs incurred as businesses comply with command and control regulations. For this paper, we will assume that businesses can pass allowance costs on to their customers, whether allowances are allocated freely to some regulated businesses, or allowances are auctioned. This contention is supported by the experience of the European Emissions Trading Scheme (ETS). When businesses in the ETS were given free allowances, they added the opportunity costs represented by the allowance value into their prices.[4]

Second, while acknowledging that choosing any single year in the past to represent or imply future markets, prices, or costs is problematic, instead of forecasting future costs, this chapter compares two scenarios for 2005. These scenarios are 1) a baseline as experienced without any carbon cost, and 2) a hypothetical 2005 that had a $15/ton carbon cost. There are several reasons for this approach.

The MIT Emission Prediction and Policy Analysis (MIT-EPPA) model (Paltsev 2007) uses a "base year" centered on 2005. Other data such as the EIA State Energy Profiles for 2005 were readily available as this chapter was being written. Even though Hurricanes Katrina and Rita occurred in late summer 2005, and natural gas and coal prices rose, prices were still lower then than they were in late 2008.[5]

Results presented in this chapter are based on the assumption of average cost pricing of electricity. California's electricity prices, as a partially deregulated market, are theoretically determined by the marginal costs (defined as the operations and maintenance (O&M) costs of the most expensive generating plant needed to supply the immediate demand for electricity). However, the estimate here assumes average cost pricing is used as under traditional regulated state electricity systems. (Average costs are determined by the cost-of-service of the regulated entity, i.e. total costs divided by total sales.) The resulting carbon costs are meant to represent a momentary, not dynamic, incidence on consumers. In effect, the results presented are a policy snapshot and do not account for changes made as a result of the price increase, or in anticipation of a carbon price.

A \$15/ton CO_2 cost is analyzed for several reasons. Although higher and lower amounts appear in policy discussions, many other studies cite a number near \$15/ton CO_2 as a low-end early carbon cost (Hassett, Mathur, and Metcalf 2007; Metcalf 2007; Green et al 2007; Burtraw 2008). The MIT-EPPA model predicts $18/ton as a starting price in 2015 to freeze GHG emissions at 2008 levels (Paltsev 2007).

In 2007, Senator Jeff Bingaman, chairman of the Senate Energy & Natural Resources Committee, along with Senator Arlen Specter proposed a "safety valve" of \$12/ton CO_2 for a future national cap and trade system. Early estimates based on President Obama's budget forecast for 2012 released in March 2009 predict CO_2 prices of just under \$14/ton. As noted by Metcalf (2007), a \$15/ton CO_2 tax may be converted to a \$55/ton tax on carbon by multiplying by 44/12, the ratio in molecular weight between C (carbon) and CO_2.

METHODOLOGY

The electricity sector is a major source of greenhouse gas emissions, and the primary target for emission reductions in many proposed greenhouse gas laws. According to Green, Hayward, and Hassett (2007), the carbon content of coal per energy unit is 1.9 MT CO_2/unit compared to .432 for crude oil, .054 for natural gas, and .009 for gasoline. Due to its carbon intensity, the imposition of a carbon price will have the first and greatest impact on coal. Coal comprises about 50% of the U.S. electricity supply. However, each state, and each utility within states, has a unique portfolio of contracts and generators from which it purchases electricity.

The number of statewide residential accounts, and the state's average annual household electricity bill are obtained from the California Energy Commission. The U.S. Department of Energy's Energy Information Administration's State Energy Profiles for 2005 lists coal and natural gas consumption by state. Also listed are the percent of residential customers and household electricity consumption as a percent of each state's total electricity consumption and the amount of coal in short tons and natural gas consumed in million cubic feet used to generate electricity for residential customers.

The $15/ton CO_2 cost is converted to an increase in the price of coal per short ton and the price of natural gas per million cubic feet using a "benchmark price" described in MIT Emission Prediction and Policy Analysis (MIT-EPPA) model (Paltsev 2007). EPPA's benchmark for converting CO_2 cost into tons of coal, million cubic feet of natural gas, and gallons of gasoline is derived from the energy content and the emissions intensity measured in megatons of carbon dioxide per British thermal units (BTU) of fuel, as shown in Figure 2. For example, coal has an emissions intensity of approximately 95 million MT CO_2/Quad BTU, while gasoline contains about 71 million MT CO_2/Quad BTU. However, the energy content of coal is 19 million BTU/energy unit, while gasoline's is only 124 thousand BTU/ energy unit. When energy content and emissions intensity are combined, a carbon price affects coal 200 times more than it would affect gasoline.

The MIT-EPPA model's benchmark price of $27/ton CO_2 equivalent produces an increase in price per short ton of coal of $55.30/short ton. The $27 benchmark price can be converted to other carbon prices following the instructions in Paltsev et al 2007 (Paltsev 2007, Table 5, Figure 5, page 21-22). For example, the $15/ton is 55% of $27/short ton of coal benchmark price. Therefore, 0.55 is multiplied by MIT-EPPA's result of $55.30 to get an added fuel cost of $30.42/short ton of coal. If the base price of coal is $26.70/short ton, then the new price of coal given a carbon price of $15/ton CO_2 is $57.12/short ton.

For natural gas, the Paltsev EPPA model's benchmark of \$27/ton CO_2 produces an added price of \$1.50/TCF to a base price of \$11.05/TCF. The same 55% calculation (rounded) results in \$830/MCF as the added price of natural gas given a carbon price of \$15/ton CO_2.

RESULTS

Applying a \$15/ton CO_2 cost (through the MIT-EPPA model's added fuel cost for coal of \$30.42/short ton of coal, and \$830/MCF for natural gas) to California's 2005 coal and natural gas consumption for household electricity, would have raised the average household annual electricity bills by \$20.92. Figure 3 shows how this result compares to the average U.S. state.

Figure 2. Carbon Cost Impact per Energy Unit for Various Fuels

Energy Unit	Coal (Short ton)	Crude Oil (Barrel)	Natural Gas (mcf)	Gasoline (Gallon)
MT C/Quad Btu	25,980,000	20,300,000	14,470,000	19,340,000
MT CO2/Quad Btu	95,260,000	74,433,333	53,056,667	70,913,333
BTU/Energy Unit	19,980,000	5,800,000	1,027,000	124,167
MT CO2/ Energy Unit	1.903	0.432	0.054	0.009
Tax/ Energy Unit	\$28.55	\$6.48	\$0.81	\$0.14

Chart from Green, Hayward, and Hassett (2007, Table 1). Source for carbon content of fuels from www.eia.doe.gov/environment.html; energy content of fuels from U.S. Department of Energy (DOE), Energy Information Administration (EIA), Annual Energy Review 2005, DOE/EIA-0384(2005), Washington, DC: EIA, 2006.

Figure 3: Carbon Cost Impact per Energy Unit for Various Fuels

	Average U.S. State	California
Annual electricity bill in 2005 (\$)	1,016	858
Annual electricity consumption per household (KWH)	11,193	6,859
Average cost per KWH (cents)	9.49	12.51
Households	2,411,107	12,480,545
Million short tons of coal (residential)	7.52	2.25
Projected added costs to coal and natural gas to the average household electricity bill (\$)	160.77	20.92

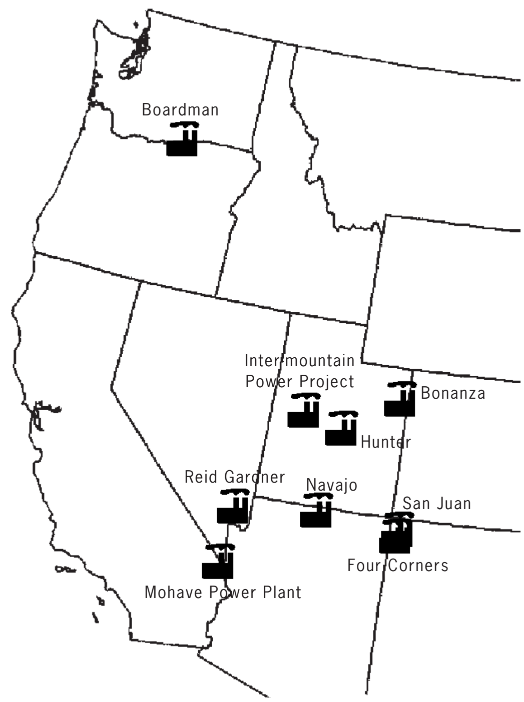
ELECTRICITY IMPORTS AND EXPORTS TO CALIFORNIA

The EIA data for coal consumption used above did not account for interstate commerce of electricity. As a result, the value for coal in California's electricity mix was only 1%. However, according to the California Energy Commission, coal represented 15% of the state's electricity mix. Almost all the coal used by California electricity consumers is combusted at out-of-state powerplants, and the electricity is imported from neighboring states. This occurs at several large powerplants located in Utah, Nevada, and Arizona (Figure 4). The U.S. Environmental Protection Agency's eGrid data listed the specific coal-fired power plants, the percentage ownership by California utilities, and megawatt hours (MWh) of electricity generated from coal in 2005. Imported coal-produced electricity costs were estimated using the MIT-EPPA model, added to California, and subtracted from the neighboring states.

MWH are converted into tonnage of coal using the average heat transfer of 6,150 MWH/ton and the typical coal powerplant efficiency coefficient of 40 percent. The resulting 2,460 tons per MWH is similar to the 2,376 pounds of CO_2 per megawatt hour of electricity found in Metcalf (2007) and 2,395 used by Green, Hayward and Hassett (2007).

The resulting tonnage of coal is converted to dollars following Paltsev (2007) as described above in the methodology section. It is subtracted from the exporting states' total, and added to California's total (Figure 6).

Figure 4. California's Out-of-state Coal-fired Powerplants



Map created by Mike Sandler based on data from 2005 State Energy Profiles, Energy Information Agency; 2005 eGrid, US EPA

Figure 5. Out-of-state Coal consumed by CA Utilities

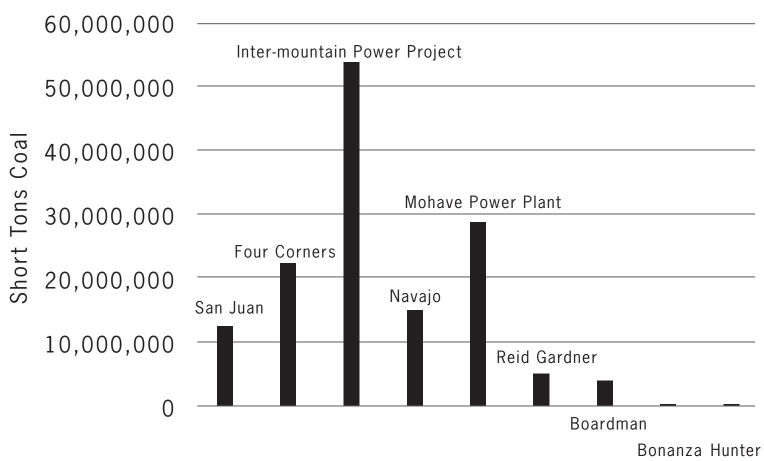
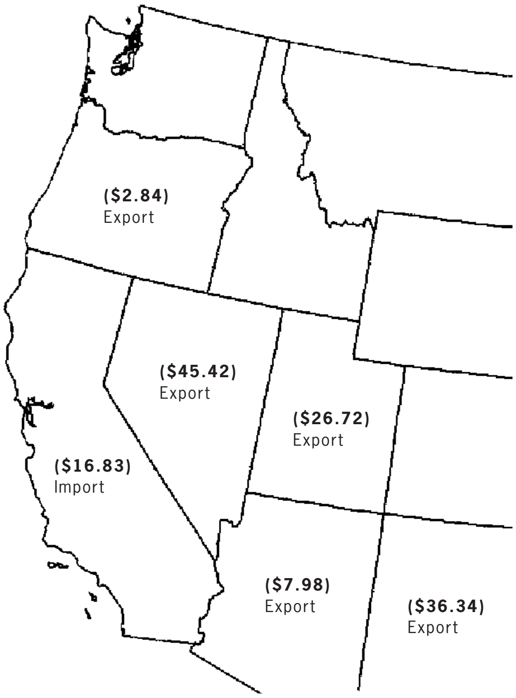


Figure 6. Changes in Household (HH) Electricity Bills due to Redistributing California's Out-of-state Coal



Map created by Mike Sandler using data sources:
2005 State Energy Profiles, Energy Information Agency;
MIT EPPA Model (Paltsev 2007(; E3 Report to CPUC

	Change in Avg. HH elec bill, ignoring exports to CA	Change in Avg. HH elec bill, includes exports
Arizona	1,016	858
California	11,193	6,859
Nevada	9.49	12.51
New Mexico	2,411,107	12,480,545
Oregon	7.52	2.25
Utah	160.77	20.92

The coal used in exported electricity represented 33% of the change in Nevada's household electricity bills, lowering Nevada's increase in average annual household electricity bills by $45.42 from $134 to $89. Imported coal-fired electricity accounted for almost half of California's increase, raising the increase in average annual household electricity bills by $16.83, from $20.92 to $37.66.

Alongside AB32, California passed another bill in 2006—SB1368—which sets an emissions performance standard for major utilities and limits the future procurement of coal-powered electricity. The performance standard is set at a limit that may not be met by existing coal powerplants, but future plants that incorporate carbon sequestration may meet it. This law will have the effect of reducing the coal in California's electricity mix as current interstate coal contracts expire.

TRANSPORTATION

A similar analysis can be performed on household expenditures for fuel in the transportation sector. Transportation fuel consumption is based on U.S. Department of Transportation data on gasoline consumption for private vehicles by state for 2005. Because gasoline has a lower carbon content than coal (see Figure 2), the MIT EPPA model adds only 14.3 cents per gallon to 2005 motor fuel prices compared to over $30 per short ton of coal.

When the same $15/ton CO_2 cost is added to 2005 household transportation fuel consumption in the 50 states, the average household's transportation fuel expenditure increases $76, from $1,811 to $1,887. For California, when the gasoline price goes from $3.78 to $3.93, the average household pays an additional

$84.75. Adding the carbon costs from electricity to those of transportation, the average California household would pay $122.41. This still leaves out indirect costs paid by households for other goods and services due to increased electricity prices.

OTHER STUDIES OF CARBON COSTS

How do these results compare with other, more complex estimates of carbon costs? James Boyce and Matthew Riddle of the University of Massachusetts, Amherst estimates that a $25/ton CO_2 price would lead to a mean per capita price impact of $288 to the average Californian (Boyce 2009). Boyce and Riddle's estimate includes transportation and the increased costs of goods and services as energy costs are passed through the economy. They estimate that the poorest decile would see only a $108 price impact, while carbon costs for the wealthiest decile were $593. The Congressional Budget Office (CBO) and the Energy Information Administration (EIA) conducted national studies of carbon costs, but did not break them down by state. CBO estimated that the net annual economywide cost of the cap-and-trade program in 2020 would be $22 billion—or about $175 per household.[6] EIA projected scenarios for the cost impact of H.R. 2454, the American Clean Energy and Security Act of 2009. ACESA would add 30 cents per gallon of gasoline by 2020, with allowance prices at $32 per metric ton in 2020, and, "in 2020, the reduction in household consumption is $134 (2007 dollars) in the ACESA Basic Case."[7]

MODERATING CONSUMER COSTS WITH REBATES

Carbon costs play a positive role in reducing demand by creating a price signal that encourages reduced fossil fuel consumption, fuel switching toward lower carbon content, and conservation and end-use efficiency. However, a case may be made for moderating the carbon costs to households. Such a case is typically based on 1) the potential for regressivity from a carbon cost (costs falling disproportionately on low-income households), and 2) the need for long-term widespread political support for economy-wide emission reductions.

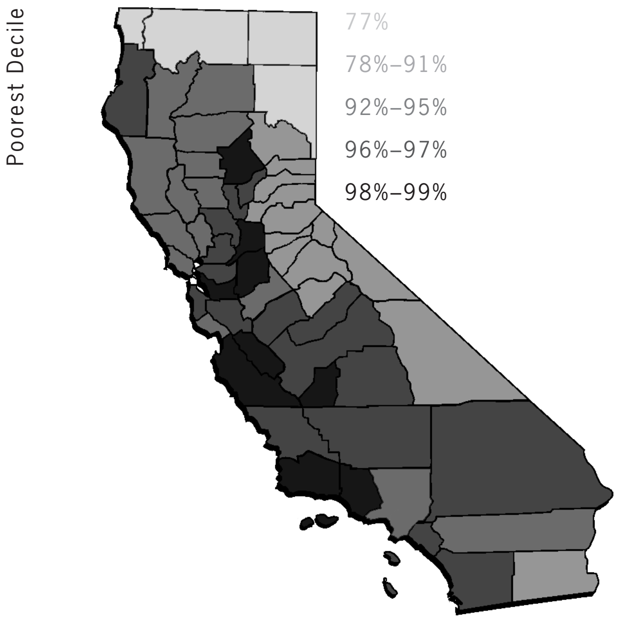
In this view, it may be both desirable and politically expedient to rebate part of the cost of transition back to consumers. Several studies have concluded that the effect of a carbon price on regressivity depends on how the revenues from the carbon tax or allowance price are used. This section presents two possible methods for returning a rebate or dividend to households from carbon tax or allowance price revenues.

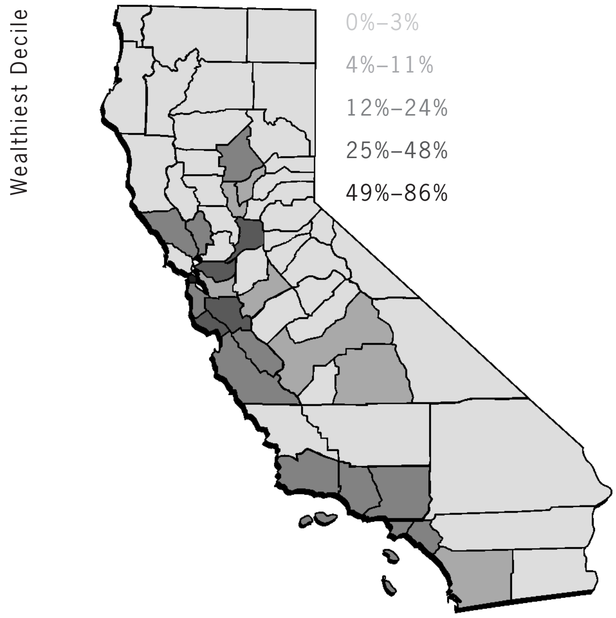
CAP AND DIVIDEND

"Cap & Dividend" provides a very direct method of compensating consumers. Lump-sum rebates, also called "dividends," from carbon tax or permit auction revenues are returned to households (Barnes 2001; Boyce and Riddle 2007). Cathy Kunkle and Dan Kammen from UC Berkeley projected that a policy that returns 50% of allowance value to households through dividends would benefit households in the poorest deciles more than the wealthiest deciles. They also find that California's northeast counties generally have higher carbon costs than the coastal counties.[8]

Figure 7. Fraction of Households Receiving Positive Net Benefits From Cap and Dividend by County, at $30/tC with 50% to Govt

Source: Cathy Kunkle and Daniel M. Kammen, Draft Memo to EAAC, August 11, 2009





CAP AND SHARE

Similar to Cap & Dividend, "Cap & Share" returns revenues to consumers, but does so by allocating tradable certificates or shares representing emission permits under an emissions cap directly to consumers. Consumers would receive income by selling their shares to regulated fuel and energy companies, possibly through banks or brokers. As people sell their shares to the upstream companies, the companies raise fuel prices, but the purchase of the share ensures that the "scarcity rent" of the permits is returned back to households. The Cap & Share concept has been promoted since 2006 by a non-profit organization based in Ireland and the UK called FEASTA—The Foundation for the Economics of Sustainability.[9]

In both Cap & Dividend and Cap & Share, the point of regulation is upstream. Fossil fuel producers and importers are required to purchase either the permits from the government or the shares from people.

CONSUMER COMPENSATION DISTRIBUTION

Consumer compensation could be distributed in many ways. If it were tied to the cost impact by state, for example rebating 75% of fees paid, then households in high-coal states such as North Dakota would receive a larger dividend than low-coal consumers in Vermont. If it were a national flat rate, then consumers in all states would receive the same rebate even if they paid more in added costs. For the national flat rate, for example, if the dividend were set according to the global per capita average of CO_2 emissions (4 tons), and if the carbon cost were $15/ton, then each person's dividend would be $60. Since California has lower carbon costs than higher-coal states such as Wyoming and North Dakota, the flat rebate would return more money to California consumers than they spent, turning carbon costs to Californians net negative.

The carbon costs paid by consumers in high-carbon states would remain higher in the flat rebate scenario than in the percent-of-fees-rebated scenario.

Figure 8: Carbon Costs and Dividends for Selected States

	Household Annual Carbon Cost for electricity at \$15/ton CO_2	Net carbon cost if rebate of \$60/person were given to households	Net carbon cost if 75% of carbon costs were rebated
Oregon	\$32.13	-\$113.10	\$8.74
California	**\$37.75**	**-\$137.98**	**\$5.23**
Arizona	\$135.61	-\$18.95	\$35.90
Wyoming	\$557.46	\$426.68	\$139.36
North Dakota	\$881.95	\$756.81	\$220.49

CONCLUSION

This paper estimates an increase of \$20.92 to the average California household's annual electricity bill if a \$15 per ton carbon cost were applied retroactively in 2005. When the carbon content of electricity exports to California from Oregon, Nevada, Utah, Arizona, and New Mexico are included, California's carbon costs increase by an additional \$16.83 per household, for a final cost of \$37.66. The results include numerous assumptions and are based on the state's electricity mix, household consumption, electricity prices, and the MIT-EPPA model's projection of a carbon cost's effect on coal and natural gas prices.

Although a carbon cost will shift demand away from fossil fuels and toward renewable energy, moderating household carbon costs can address disproportionate costs to low-income households and encourage long-term political support for economy-wide emission reductions. The most direct method to moderate consumer impacts is to return a portion of carbon costs back to consumers through a cash dividend, tax rebate, or transferable emissions share.

The return of allowance value could represent a transfer of billions of dollars. Depending on the distribution method, the net cost to Californians could be entirely eliminated, albeit at the expense of other states. Policies to assist households with short-term carbon costs are an important, part of state and national climate policy, and deserve further discussion.

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http://www.climatechange.ca.gov/climate_action_team/reports/2006-04-03_FINAL_CAT_REPORT.PDF

3 CARB AB32 Scoping Plan
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9 FEASTA's website is http://www.feasta.org.
The Cap & Share website is www.capandshare.org.
The author maintains a website describing a similar concept called Carbon Share at www.carbonshare.org.

3

GETTING ON BOARD: HOW PUBLIC TRANSIT CAN PUT CALIFORNIA BACK ON TRACK

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California is in crisis.[1] Amid what is often described as the worst economic situation since the Great Depression,[2] California is among the states hardest hit by home foreclosures.[3] The state suffers from the political inability to pass a budget and pay its bills,[4] has one of the highest unemployment rates in the nation, and has imposed mandatory furloughs on state employees.[5] Highway and water system infrastructure throughout the state is crumbling,[6] and the state has declared a state of emergency for drought.[7] All of these daunting challenges must be addressed while California continues working to avoid the potentially severe impacts of climate change.[8]

Times of crisis can also be times of significant opportunity. The confluence of numerous challenges and demographic changes has created an opportunity for meaningful and long-lasting reform in land use and transit infrastructure in California. Through integrated policies, California can build a more sustainable society while putting people to work, improving public health, and reducing greenhouse gas emissions. As the economy begins to recover, the question becomes how will California move forward. Will the state fall back upon failed systems, or choose a stronger future?

This chapter addresses the necessity of reform and innovation in the land use and transit arena. In Section I, the various challenges mandating the need for change are reviewed. Section II then surveys the synergistic benefits attainable through increased use of public transportation. Section III examines three elements of reform for public transit funding and transit-oriented development. First, Section III considers the potential impact of Senate Bill 375, a landmark bill addressing land use and transit planning in California.[9] Second, the section looks at public support for mass transit, particularly the success of local transit sales tax measures on the November 2008 ballot. Third, Section III reviews potential funding mechanisms and price signals to encourage transit use.

CURRENT AND FUTURE CHALLENGES MANDATE REFORM

California faces significant obstacles in the next fifty years, many of which can be addressed by key reforms and a strong focus on public transportation. A brief survey of these challenges follows, before turning to examine the role public transit can play.

AN ECONOMIC CRISIS HEIGHTENED BY A POLITICAL GRIDLOCK

The budget situation that emerged in early 2009 in California could be considered the height of political theater, but for the devastating consequences of extensive delays and lack of will to resolve the state's structural deficit.[10] In the budget passed by the legislature in February 2009, the state provided zero dollars in funding for public transit operations by eliminating the State Transit Assistance (STA) program.[11] For the last three decades, the STA had been the only ongoing source of daily operations funding.[12] The consequences of this budget decision were stark: nearly every transit provider in the state has increased fares and/or cut services.[13]

Another perennial question in the budgeting process is whether Proposition 42 funding will be diverted to the General Fund. Proposition 42 was passed by California voters in 2002 and mandates that sales taxes from gasoline sales be directed to streets, roads and highways projects and public transportation.[14] While the 2008-09 budget maintained Proposition 42 funding, loopholes have allowed the legislature to divert those monies to the General Fund in nearly every year since Proposition 42 was passed.[15] Even when fully funded, Proposition 42 dollars are not required to go directly to mass transit projects. In short, Proposition 42 funding has not been reliable.[16] But this situation may be changing.

The legislature frequently relies upon shifting earmarked funds to the General Fund to help resolve annual deficits. This practice may be coming to a forced end, however. Recent court rulings have struck down the legislature's ability to shift money between the General Fund and transportation funds earmarked through the initiative process.[17] The California Transit Association sued the state for transferring over $5 billion from Propositions 116, 2, 42 and 1A to the General Fund.[18] In June 2009, the California Court of Appeal ruled that the challenged transfers were illegal.[19]

With the refusal of the California Supreme Court to hear the state's appeal, transit advocates claimed a significant victory for protecting future transit funding.[20] Nonetheless, questions remain. The court decision should deter the legislature from diverting transportation funds in the future, but the court claimed no authority to order the legislature to restore the challenged transfers to public transit accounts.[21] While transportation funding may largely be spared going forward, looming deficits foretell continued deep budget cuts.[22] The court decision has no impact on the elimination of the STA program. As the Executive Director of the California Transit Association stated, the court decision "is one more obvious sign that the whole budget process needs serious reform."[23]

Transit agencies throughout the state find themselves in line to receive funds for capital development from the American Reinvestment and Recovery Act (ARRA) while facing significant deficiencies in operations funding due to the elimination of the STA program.[24] Additionally, the economic crisis has reduced sales and property tax revenues, further depleting operations funds.[25] Public transit recently set new ridership

records in the face of $4.00 per gallon for gasoline during the summer of 2008.[26] However, the state's budgeting decisions have reduced public transit services.[27] The funding allocations seem contradictory in the face of California's efforts to combat climate change.

CLIMATE CHANGE AND CLEAN AIR

The California Legislature, in passing the California Global Warming Solutions Act of 2006,[28] aptly described the potential harms of climate change to California:

> *Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.*[29]

As described by the legislature, California stands to suffer extraordinary economic losses and a substantial drop in the quality of its residents' lives if efforts are not taken to mitigate climate change.

To address California's contributions to climate change and urge other governments to action, AB 32 directs the California Air Resources Board (CARB) to reduce California greenhouse gas (GHG) emissions to 1990 levels by the year 2020.[30] CARB has identified in its scoping plan a goal of reducing GHG emissions from "Regional Transportation-Related GHG Targets" —that is, changes in land use decisions—by five (5) million metric tons of carbon dioxide equivalent ($MMTCO_2e$).[31] CARB identified a further reduction in GHG emissions of one (1) $MMTCO_2e$ from the development and operation of a high speed rail system.[32]

SB 375 builds upon AB 32 as a means for achieving the 5 MMT CO_2e reduction identified in the scoping plan. The transportation sector is responsible for over 40% of California's total GHG emissions.[33] In passing SB 375, the legislature found and declared that reduction of GHG emissions from automobiles is not sufficient to obtain the AB 32 goals.[34] Instead, meeting the 2020 target under AB 32 will require reducing the number of vehicle miles traveled (VMT) by Californians, which will in turn require changes to land-use decisions and the expansion of existing and new mass transit.[35]

Reducing VMT will also aid the state in its efforts to clean California's notoriously polluted air.[36] As a particular example of the air problems in California, the San Francisco Bay Area and the South Coast Air Basin (which includes Los Angeles County) have failed to meet federal standards for ozone levels since 1989.[37] Ozone (smog) pollution—something with which most residents of those areas are intimately familiar—is linked to serious health problems, including respiratory illness and premature death.[38]

INCREASING POPULATION AND DENSITY

In 1982, California's population was approximately 24.5 million people[39] and its density reached 159.1 persons per square mile.[40] In 2007, its population had increased to 37.6 million people.[41] The state's density rose to 234.4 persons per square mile. These trends represent increases of 53% and 47%, respectively.[42]

The number of people in California is expected to increase by more than 50% over its 2007 population by 2050, rising to a projected 59.5 million.[43] Those additional 25 million people will need somewhere to live. Either cities will continue to sprawl or urban density will increase, with the critical fulcrum being the ratio between outward "greenfield" growth and urban infill. For example, the density of Los Angeles County increased over 34% from 1982 (1,894 persons per square mile) to 2007 (2,544 persons per square mile). As California's population increases, its major job centers will undoubtedly see an increase in density. Density is an important variable in the ridership equation, and insufficient density is often blamed in part for the underuse of certain transit lines. If regional development is planned in accordance with smart growth principles, funneling new residents into transit-oriented development, the challenge of increasing population can be an opportunity for increased transit and healthier communities. The alternative is increasingly worse traffic congestion and commute times.

LENGTHY COMMUTE TIMES

According to the U.S. Bureau of the Census, as of 2004, Americans spent more than 100 hours per year commuting to their workplaces.[44] With an average one-way commute time of 26.5 minutes, California had the dubious honor of the fifth longest average commute in the nation. Continuing to use Los Angeles—notorious not only for its air pollution but also its traffic—as an example, Angelinos faced an average commute of 29 minutes.[45] Approximately 3% of Los Angeles residents—more than 117,000 people —suffered commute times of more than 90 minutes one-way, among the highest percentages of so-called "extreme commutes" in the country.[46]

In 2000, 71.8% of all Californians drove to work alone;[47] in Los Angeles the figure was slightly lower at 70.4%.[48] An additional 15% of Angelinos carpooled, while 6.3% took a bus, subway or rail.[49] Elisa Barbour, author of a study of commute times for the Public Policy Institute of California (PPIC), told the media:

> *The decentralization of jobs and homes has a complicated effect on commuting, leading to both long, congested suburb-to-central city commutes and relatively short suburb-to-suburb commute times. … As policymakers invest in transportation, it's critical to consider changing commute patterns because investment choices will help shape public demand by influencing travel options and development patterns.*[50]

With the California population expected to grow significantly over the next forty years, commute times in Los Angeles and the rest of California can only be expected to worsen without changes in land-use decision-making and the development of new and/or increased mass transit services.

CALIFORNIA MUST TAKE ADVANTAGE OF THE SYNERGISTIC BENEFITS OF PUBLIC TRANSIT

Extensive benefits come with expanded public transit infrastructure and higher ridership. Perhaps the most important area is public health. In recent years, public health experts have returned their attention to the interaction of people with their built environment, with significant results. The design of our cities and the significant expansion of suburban sprawl have had

significant negative effects on the health of our communities.

Sprawl and the resulting dependency on personal vehicles has led to sedentary lifestyles, contributed to increasing obesity, and increased motor vehicle air pollution.[51] The more people who drive, the worse traffic becomes. Cars operate less efficiently in congestion, resulting in even higher levels of pollution.

Re-orienting California development around public transit begins the process of improving public health. Fewer cars on the road and fewer miles traveled means less congestion. This reduction in car use results in faster commutes. It lowers stress and produces more efficient car travel and thus fewer emissions. The costs of motor vehicle pollution, in terms of its impact on human health, are estimated to be between $29 billion and $530 billion annually.[52] Transit riders walk more and get more exercise, helping to reduce obesity levels and improve the health of Californians generally.[53] With 30% of Americans obese and obesity levels rising, transit-oriented developments promote physically active lifestyles and are a smart priority for local governments as means to improve the health of their citizens.[54]

Another improvement in public health comes simply from the fact that riding public transit is significantly safer than personal vehicles: taking the bus is 170 times safer, and overall, the number of fatalities, injuries and accidents on public transportation is 190,000 less than occurs from personal vehicle trips annually.[55] Additionally, the health and other benefits of public transportation helps to reduce the costs of health care in multiple ways, from healthier people needing less health care, to reducing the costs of non-emergency health care travel.[56]

There are substantial economic benefits that come with increased use of public transportation. Based on the average costs of driving, parking, and October 2009 gas prices, transit riders in California save approximately $10,000 annually in San Diego and Los Angeles, and as much as $12,000 per year in San Francisco.[57] Communities enjoy six-to-one economic returns on investments in public transportation, and every $10 million put towards capital development or operating expenses generates $30 million specifically in increased business sales.[58] According to the 2009 Urban Mobility Report, in 2007, public transportation use resulted in savings of 646 million hours of travel time, and 398 million gallons of fuel.[59] Between 2005 and 2009, public transit use avoided $13.7 billion in congestion costs.[60]

Transit and transit-oriented development (TOD) have further benefits. The national security argument for increasing average fuel economy is well established. It holds equally true for reducing VMT. The fewer miles driven, the less gasoline consumed, and the less foreign oil that needs to be imported into the U.S. Public transportation also reduces carbon emissions by 37 million metric tons each year.[61] Decreasing VMT has the additional benefit of reducing the overload of California's fragile highway infrastructure, thereby lowering the stress and burden on the system and saving the state money in maintenance and repair costs.

Increasing transit use and TOD will also help preserve the ever-diminishing open space still left in California. Expanding transit options where necessary and building mixed-use complexes around existing transit will make it easier to avoid further greenfield development while accommodating California's increasing population into vibrant urban centers. Lastly, and of particular importance in the current economic climate, investing in public transit creates jobs.

Expanding new transit infrastructure means new construction contracts and engineering work. Increasing service, whether new or existing lines, creates new operator positions, as well as increased needs in maintenance and control departments.

Investing in public transit only to restore transit services to the level Californians enjoyed two years ago would create and preserve jobs by re-hiring operators that had to be laid off and preventing further service cuts. A study on the first ten weeks of ARRA's investment in public transit projected the $8.4 billion invested would create over 250,000 jobs, with "green jobs" going to blue-collar workers constituting 67% of the total.[62]

This discussion of the benefits of public transportation is not meant to be exhaustive. Rather, the goal is two-fold: first, to demonstrate the wide range of benefits that accrue with increased use of public transportation, and second, to demonstrate the significant domino effect of public transit benefits. There is a positive feedback effect as each category of direct benefits leads to extensive indirect benefits. The potential gains from increased transit ridership are vast but not always well understood, and are worthy of committed pursuit. The question then becomes how to realize these benefits.

IMPLEMENTING PUBLIC TRANSIT AND LAND-USE REFORMS

Business as usual development will not lead to sustainable communities, healthier Californians, or a more fiscally stable state. Reform is necessary to achieve the benefits that increased transit ridership and transit-oriented development can provide. This section considers three avenues of reform essential to putting California on the path to a more secure future. The first path is legislative reform, with a landmark bill—SB 375—already in force. The second is the need for public support, which is already strongly in favor of expanded transit. Third, increased investments in public transportation are needed—particularly in the form of dedicate revenue streams upon which transit providers can confidently rely. The adoption of price signals to influence commuter behavior toward transit use is also important.

CHANGING THE REGULATORY LANDSCAPE: SB 375 ENTERS THE SCENE

SB 375 seeks to influence land-use and transit planning decisions by directing federal and state transportation dollars towards sustainable development plans that take a holistic approach to housing and transit development, while enticing cities and developers to commit to sustainable growth through CEQA incentives. Control over land use and zoning is traditionally within the domain of local governments and is a power zealously guarded by those authorities.[63] As such, local councils hold significant power over patterns of development. Transit planning takes place at the regional level but with significant local involvement.

Federal and state law mandates the existence of metropolitan planning organizations (MPOs) to plan and coordinate the distribution of federal highway and transit dollars, and state transportation funding, in urban areas, respectively.[64] Each MPO produces a Regional Transportation Plan (RTP), which includes planned projects and programmed funding. The MPO overseeing the San Francisco Bay Area is the Metropolitan Transportation Commission (MTC). In Los Angeles the MPO is the Southern California Association of Governments (SCAG).[65] Decision-making authority rests with MPO board members, who are local officials serving in the additional role.[66]

While the power of local governments is widely debated in the academic literature, in California, cities have significant authority. They directly control new development in accordance with their occasionally revised general plans, and local officials affect transit funding decisions as board members of MPOs. The influence of cities in the state capitol should also not be underestimated.[67] The League of California Cities, representing city interests during negotiations, demanded revisions to SB 375 that would protect local control.[68]

Developers feared the loss of their suburban projects and local officials worried about relinquishing land use and transit planning powers to the state government.[69] Passage of SB 375 was eventually made possible by a "Coalition of the Impossible," consisting of "builders, environmentalists, cities, housing organizations and transportation planners."[70] The final version of SB 375 explicitly sought to avoid usurping local powers and adopted amendments providing local governments with alternative means of compliance. It is highly unlikely SB 375 would have passed without these provisions.[71]

CHANGING DECISION-MAKING THROUGH INCENTIVES

SB 375 has three primary goals: 1) use the regional transportation planning process to achieve the emissions reduction goals established in AB 32; 2) offer streamlined environmental review under the California Environmental Quality Act (CEQA) as an incentive for sustainable development, and 3) coordinate the allocation of regional housing needs with the regional transportation plan (RTP).[72] Through a series of incentives, SB 375 provides the opportunity for unified regional planning decisions across the climate change, housing and transportation arenas. SB 375 does not, however, require cities to adopt this model of planning.

UNIFYING TRANSPORTATION AND HOUSING PLANNING

Before the passage of SB 375, state-mandated transportation and housing plans were separate and distinct processes with the potential for significant efficiency gains through adoption of a unified, holistic approach.[73] SB 375 resolved this disconnect by synchronizing the timing of RTP development and the preparation of housing plans.[74] The latter takes the form of housing elements in local general plans. These plans must incorporate regional housing needs allocations (RHNAs) developed by the state to regions, and distributed by regional council of governments to localities.[75]

In addition to unifying the timing of the RTP and housing element development, SB 375 requires RTPs to plan for RHNAs. The RHNA should be consistent with the development projections used in the RTP.[76] Given the projected population increases in California and the consequent increase in housing demand, the mutual consideration of housing and transit needs should lead to an increase in sustainable development.

THE SUSTAINABLE COMMUNITIES STRATEGY

One of the central components of SB 375's planning reform is a Sustainable Communities Strategy (SCS).[77] The SCS is drafted by the MPOs with input from each region's localities, and is subject to limited CARB approval for feasibility.[78] The SCS is a new component of the RTP, and as such must build upon the federally-mandated forecast of the region's development over the next two or three decades.79 This forecast must be realistic. It cannot assume, for example, that growth will occur in a manner wholly inapposite to local general plans.[80]

Given that forecast of growth, the SCS must identify areas to fulfill housing needs across the socioeconomic spectrum and the transit services necessitated by

that growth.[81] The resulting development plan, *if feasible*, must be designed to achieve the region's GHG reduction target, set by CARB as per AB 32.[82] The SCS must further quantify the projected GHG reductions and what shortfall, if any, will result relative to the regional target.[83]

Perhaps the most important aspect of the SCS is that it is subject to the internal consistency requirement of the RTP.[84] Much like a city's general plan, the various components of the RTP—the action element, the financial element, and the SCS—must not conflict. For example, if the RTP plans for the expansion of intercity rail but programs no money towards that project, the RTP is not internally consistent. It must be revised to be eligible for state and federal dollars.

SB 375 mandates that the SCS is subject to the internal consistency requirement.[85] As such, the RTP's funding and action plans must be consistent with and support the land-use and transportation plans articulated in the SCS.[86] The practical effect of this requirement is that the RTP must funnel federal and state dollars to the SCS's plan, thus likely leading to increased public transportation and TOD, and making GHG reductions far more likely to occur.

The SCS does, however, face key challenges in achieving its goal of effecting real change in development patterns. First, the SCS does not supersede local plans.[87] There is no requirement that cities amend their plans to be consistent with the SCS.[88] As the League of California Cities notes, "If a certain type of development pattern is unlikely to emerge from local decision-making, it will be difficult for the regional agency to say that it reflects current planning assumptions."[89] Therefore, if SB 375's incentives do not bring cities on board, the impact of the SCS will be limited.

Finally, an SCS is required only if the MPO concludes that it is feasible to achieve the region's GHG reduction targets. If the MPO finds that the target cannot be feasibly attained, or if the ARB concludes the SCS will not achieve the necessary reductions, the MPOs must instead draft Alternative Planning Strategies (APS). The APS is not part of the RTP and therefore is not subject to the internal consistency requirement, severely limiting its potential impact relative to an SCS. Accordingly, any measures or policies identified by the APS will not influence the programming of transportation funds in the RTP.

It is unclear what effect an APS will have on regional development patterns. An APS does draw attention to GHG emissions. But its lack of direct influence on transportation funding decisions calls into question whether sustainable development will gain an edge in the fierce battles for transportation dollars. However, if a specific project complies with the SCS or APS, new incentives become available to the project.

CEQA INCENTIVES

The California Environmental Quality Act is a powerful law that affects any project or development undertaken by or requiring approval from any California state or local government entity.[90] Preparation of CEQA documents typically costs in the hundreds of thousands of dollars, and the entire CEQA process can take longer than a year in many cases. CEQA provides for enforcement of its provisions by private citizens. As a result, developers frequently find their projects delayed and pushed over-budget due to litigation expenses. CEQA has been a frequent target of Republican state legislators and of developers since its inception.[91]

To encourage cities and developers to pursue TOD, SB 375 creates a set of CEQA incentives.[92] SB 375 creates a new category of projects—Transit Priority Projects (TPP)—and offers three kinds of reduced CEQA review to qualifying projects.[93] Of the most relevance here, TPPs must meet a minimum density requirement and

be located “within one-half mile of a major transit stop or high-quality transit corridor included in an RTP.[94]

It is unclear what effect the CEQA incentives will have on possible development. The first category is widely considered nearly impossible to attain. But there are potentially significant gains to be added from the remaining incentives in both time and money. If cities and developers decide the CEQA incentives are valuable and choose to pursue them, the result could be greater support for and faster development of new and/or expanded public transit service.

IF INCENTIVES FALL SHORT, ADOPT MEANS OF ENFORCEMENT

There is significant uncertainty in how much SB 375 will accomplish, and whether the CEQA incentives will motivate developers and cities to align their plans with regional plans. Many questions remain, but of particular interest is the extent to which local jurisdictions will modify their general and specific plans to incorporate transit-oriented development and thus interface with regional public transit development.

California cannot afford extensive delay in changing its patterns of developments. Incentive-based efforts were, and are, the appropriate place to begin. But if the incentives fail to effect significant change, the state must seek a means of enforcement. Two potential changes to SB 375 would significantly strengthen the act.

First, whether a MPO creates a SCS or APS, either document needs to be part of the RTP and subject to the internal consistency requirement. Thus, under both planning scenarios, federal and state transportation funds will be directed towards sustainable development plans. This requirement alone may not solve the problem, however, since local officials are the MPO decision-makers and may not be inclined to force localities into particular planning decisions. Strong leaders with regional visions are needed to implement the goals of SB 375.[95]

Second, the state could utilize the existing model provided by the RHNA process. The state distributes fair-share assignments to the regional council of governments, which then assigns specific housing development requirements to member cities. The cities *must* amend their zoning to fulfill their RHNA. Should SB 375 and its incentives prove ineffective, the state could model SB 375 after the RHNA in two ways.

First, California should mandate that city plans comply with an SCS. Initially, cities should have the discretion to choose how to revise their plans to be consistent with the SCS. Second, if a city fails to do so to the state’s approval, then the state should mandate an “SCS element” in the city’s general plans, just as the state mandates housing elements. These steps will force the cities to adhere to the regional planning model, and thus increase the likelihood of sustainably developed regions with sufficient and well-designed public transportation.

BUILD POPULAR SUPPORT

California voters approved tens of billions of dollars in expenditures on mass transit infrastructure and operations in the November 2008 election. On the state level, nearly 53% of voting Californians passed Proposition 1A.[96] Proposition 1A authorized the sale and expenditure of nearly $10 billion in bonds to fund the development of a high-speed rail system eventually to connect the four major metropolitan areas of California: Sacramento, the San Francisco Bay Area, Los Angeles, and San Diego.[97] Regionally, voters approved three new transit-linked sales taxes, exceeding the required two-thirds supermajority for

tax increases in each case. These approvals came in despite of the California budget crisis and the then rapidly deteriorating global economic situation.

In Los Angeles County, the Metropolitan Transportation Authority placed Measure R on the ballot, seeking voter approval for a half-cent sales tax increase to last for thirty years.[98] Nearly 68% of voting Los Angeles County residents approved Measure R.[99] It is expected to generate $40 billion over its term.[100] Revenues will support dozens of projects across five major categories: rail expansion (including extending the subway to West Los Angeles); street improvements; traffic reduction; public transportation (generally related to bus service), and quality of life projects (e.g., soundwalls).[101] Significant job creation is potentially entailed in these various programs.

In the San Francisco Bay Area, voters approved two sales taxes to fund rail projects. Voters in Santa Clara County approved Measure B with 66.78% of the vote.[102] Measure B, a thirty-year one-eighth cent sales tax, will fund the operation and maintenance costs of extending Bay Area Rapid Transit (BART) to San Jose.[103] The BART extension will create a new transit hub in San Jose with connections to multiple transit rail lines, including high-speed rail, local light-rail and local busses, with easy access to Downtown San Jose.

Voters in Sonoma and Marin Counties approved Measure Q with 69.6% of the vote.[104] Measure Q increases the sales tax by one-quarter of one-percent to fund the construction and operation of a new rail system seventy miles in length.[105] The Sonoma Marin Area Rail Transit, or SMART train, will bring passengers to the ferry terminal, where they can complete their journey to San Francisco.[106] SMART is expected to remove over 1.3 million car trips from Highway 101 per year.[107] Plans are already in development to build mixed-use TOD “transit villages” around the new SMART stations.[108]

With expanding transit service comes a need for increased infrastructure capacity. In anticipation of high-speed rail and expanding local rail service, both San Francisco and San Jose are developing new downtown transit centers. In San Francisco, redevelopment has begun of the Transbay Transit Center, which will host local rail, high-speed rail, bus lines, underground connections to BART, offices, retail stores, and a public park.[109]

The project also calls for the redevelopment of the surrounding area, building commercial, retail, and residential space, including affordable housing. Similarly in San Jose, the supporters of Measure B envision the redevelopment of the Diridon Train Station into the “Grand Central of the West.”[110] The greatly expanded station will provide capacity for inter-city and regional rail combined with local light-rail and bus service, central among nearby entertainment and housing.

In July 2009, the PPIC released the results of its annual statewide survey of Californians’ views on the environment.[111] Seventy-seven percent of Californians stated that they favor expanding mass transit and using existing roadways more efficiently, as opposed to building more freeways. One important aspect to recall is that this popular support must be maintained once the public realizes that to get the expanded transit, some of their freeway lanes may become toll lanes, or the costs of parking may increase. Effective communication with the public of the benefits of each policy will be essentially to sustaining and growing public support.

SB 375 has put the incentives in place, and there is demonstrated popular support for expanded transit infrastructure and operations. These are critical steps, but are unlikely to achieve success without also addressing funding and economic policies bolstering public transit.

INCREASE THE AMOUNT AND RELIABILITY OF FUNDING AND IMPLEMENT PRICE SIGNALS

In an ideal world, in which the state was not facing fiscal crises, transit advocates would wait for the legislature to fix the structural deficit in the California budget. They would then prioritize transit and sustainable development in balanced budgets and put major funding behind the SCS and transit operations.[112] However, there is no reason to believe that California's recurrent budget crises will be resolved in the near term.

The perpetually chaotic budgeting process creates enormous uncertainty for transit planners and operators. Further exacerbating their fiscal positions, the Los Angeles County Metropolitan Transportation Authority and the Santa Clara Valley Transportation Authority rely on sales tax receipts for more than 60% and 75% of their funding, respectively.[113] Sales tax revenues are volatile and highly susceptible to economic downturns.

There are two primary goals funding reform should attempt to achieve. First is the provision of reliable, increased funding streams to transit providers. The second goal should be to send a price signal to drivers that will lead them to adopt more sustainable behaviors. The majority of individual drivers do not calculate the full breadth of the externalities their driving imposes on their communities and ecosystems. Driving imposes significant costs on communities, local, regional and state government, ranging from infrastructure maintenance to greater use of emergency services to higher health care costs.

The direct and indirect economic benefits of public transportation accrue at every level of government and for individuals and communities, and thus in many instances increased use of public transportation is economically rational behavior. However, a price signal is needed to overcome market deficiencies, primarily the externalities of suburban sprawl and individual driving, and a lack of information.[114] When the price of gasoline reached $4.00 per gallon in summer 2008, consumers significantly adjusted their behavior, increasing transit use and reducing VMT. The rationality of an effective price signal, and the significant benefits that accrue from more rational consumer behavior, transcends political lines.[115] Use of price signals deserves full consideration and, ultimately, implementation.

Increasing the state taxes on gasoline should be part of the conversation.[116] The California gasoline tax is not indexed to inflation and has not been increased since 1994.[117] "In real terms, California fuel tax revenue per vehicle mile traveled today is worth approximately 36 percent of what drivers paid in 1970."[118] Increasing the gas tax both generates revenue and influences consumer behavior, leading to more efficient use of roadways and associated economic and public health benefits.[119] However, the failed attempt to increase the gas tax during the February 2009 budget negotiations demonstrates that generating Republican support is highly unlikely. Nonetheless, the gas tax should be on the table.

The gas tax is not a perfect solution but the price of gas has been demonstrated to be a powerful price signal. Criticisms of the gas tax include its regressivity and its declining returns in the face of increasing fuel efficiency. A tax based on VMT, using global

positioning satellite (GPS) or tolling technology, is a frequently suggested but highly controversial idea, even if more economically efficient than the gas tax.[120] As to the regressivity of the gas tax, this can be mitigated through refunds or lowering rates for the lowest tax brackets.[121] Revenue from the increased gas tax could thus be distributed to compensate those hit hardest by the tax increase. It would also flow toward infrastructure maintenance costs (lowered due to VMT reductions, if the tax is set correctly) and toward transit operations.

With the court decision in *Shaw v. Chiang*, Proposition 42 may become a reliable source of funding. Given the budget challenges facing in the legislature, however, relying on the state for reliable transit funding comes with high risks. Direct democracy has generated transit revenue on the local level, through super-majority approval of ballot items such as Measure B and Measure R, placed on the ballots by transit providers. Sales taxes, as already noted, are highly susceptible to economic downturns.

The PPIC's *California 2025* report asserts that county-level funding reduces flexibility in funding programming, favors projects designed to elicit support of suburban voters, and serves county-level purposes at the cost of regional needs.[122] The approach of Measure B suggests county transportation authorities may be more conscious of planning on the regional level, an effort now strongly pushed forward by SB 375. Additionally, targeting suburban voters may no longer be a barrier. Many of those voters now wish to live closer to work and Measures R and Q will spur the development of new transit villages. Another shortcoming of sales taxes is that, unlike user fees, everyone pays equally regardless of their transit use. Thus, the sales tax does not incentivize changes in behavior with respect to driving and transit use.[123]

As to regional planning, Senate Bill 406, proposed and passed by the legislature in 2009, would have allowed certain local or regional governmental bodies to increase motor vehicle registration fees in their jurisdiction. The fees would have funded the development of Sustainable Community Strategies under SB 375.[124] However, the bill was vetoed by Governor Schwarzenegger in October 2009, on the basis that such fee increases should be subject to voter approval.[125]

There are myriad other ideas for how to generate revenue for public transit and to send price signals to individuals.[126] One option solely on the cost side is to look within and seek to maximize the efficiency—and minimize unnecessary costs—at transit providers. Internal audits could help streamline the provision of transit services. Another funding option (without price signals) is to distribute revenues generated under a cap-and-trade program for carbon emissions under AB 32 to support public transportation.[127]

Next, the cost of parking is an important policy subject to local government control. UCLA Professor Donald Shoup's research, and particularly his seminal book, *The High Cost of Free Parking*, examines the role of parking prices with respect to transportation planning and land use decisions, and consumer behavior.[128] Setting prices for parking too low, Shoup argues, results in excess vehicle travel as drivers look for open parking spots, resulting in higher VMT and the extensive accompanying negative impacts.[129] Shoup advocates that parking rates be set such that 15% of spaces are available at any given time. The result is both reduced VMT and higher revenue.[130]

Lower traffic congestion from circling drivers will help reduce delays in transit services. Additionally, by internalizing the external costs imposed by subsidized parking in the form of higher prices, many drivers will likely be dissuaded from driving in the first place,

leading to higher transit ridership. Further, Shoup recommends that the additional revenue be reinvested in the area where it is collected.[131] Part of these revenues could be used to support transit services in that area, for example, through contributions to the transit provider for the cost of operating the line or increasing service frequency. Or the revenues could be used to improve local stations in order to increase the desirability of the area.

'Whether for innovative parking management or high occupancy toll lanes, leveraging federal dollars whenever possible is an important strategy for state and local governments to pursue. Mayor Villaraigosa of Los Angeles announced in October 2009 his intention to accelerate the rail projects approved as part of Measure R dramatically. His "30/10" plan would complete twelve rail projects in a decade, instead of over thirty years.[132] Leveraging federal dollars will be critical to the success of this ambitious plan. Another avenue with respect to federal funding is for California to lobby the federal government to allow current sources of federal funds, stimulus or otherwise, to be used for daily transit operations.

Los Angeles has already successful acquired federal dollars to implement a test project of High Occupancy Toll (HOT) lanes in 2011.[133] HOT lanes are an example of congestion pricing. Segments of two carpool lanes in the Los Angeles area will be converted to HOT lanes. The toll for using the HOT lanes varies during the day, with the price set to keep traffic in the HOT lane moving at full speed.[134] In addition to the conversion of the carpool lanes to HOT lanes, the project also will increase bus service and vanpools. Toll revenues will first go towards the operation of the system, with remaining funds expected to "improve or enhance transportation services in the corridor where the toll is generated."[135] HOT lanes are sometimes criticized as regressive and potentially creating an express lane for the wealthy. But research indicates that non-tolled lanes also experience a reduction in congestion when HOT lanes are implemented. In addition, lower income residents, who are more likely to be transit riders, benefit from the investments made in local public transportation. Two of the explicit goals of the program are to change the behavior of commuters and generate revenues to support and increase transit options.[136]

CONCLUSION

California faces substantial transportation challenges. The state and many of its largest urban areas have taken important steps toward sustainable development. It is up to political and citizen leaders to take advantage of the opportunities for reform to move the state forward in a healthier manner. SB 375 is a groundbreaking effort to coordinate environmental, development and transit-related concerns legislatively. It remains to be seen whether either more incentives or stricter mandates will be required for SB 375 to achieve its potential.

Combining reformed transit funding with implementation of effective price signals is essential to realizing the vast benefits associated with increased public transportation. With public support for mass transit and more efficient use of existing roadways strong, it is up to the political and citizen leaders to communicate the benefits of new reforms. By maintaining public support, moving forward with the provisions of SB 375, and implementing economic reforms, public transportation supporters can usher in a better future for all Californians.

APPENDIX A: ACRONYMS IN THIS CHAPTER

AB = assembly bill

APS = alternative planning strategy

ARRA = American Reinvestment and Recovery Act

BART = Bay Area Rapid Transit

CARB = California Air Resources Board

CEQA = California Environmental Quality Act

GHG = greenhouse gas

HOT = high occupancy toll (lanes)

MTA = (Los Angeles County) Metropolitan Transportation Authority

$MMTCO_2e$ = million metric tons of carbon dioxide equivalent

MPO = metropolitan planning organization

MTC = Metropolitan Transportation Commission

PPIC = Public Policy Institute of California

SB = senate bill

SCAG = Southern California Association of Governments

SCS = sustainable communities strategy

SMART = Sonoma Marin Area Rail Transit

STA = State Transit Assistance program

RHNA = regional housing needs allocation

RTP = regional transportation plan

TOD = transit-oriented development

TPP = transit priority project

VMT = vehicle miles traveled

ENDNOTES

1 The chapter was originally a term paper prepared for Public Policy 233 in winter quarter 2009. It has been updated to reflect developments as of October 2009. Because many transit-related acronyms are used in this chapter, an Appendix with definitions is provided.

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67 *See* Daniel Rodriguez, “Localism and Lawmaking,” *Rutgers Law Journal* 32 (2001) (arguing, *inter alia*, that local governments act as political interest groups in state lawmaking).

68 “The League of California Cities is an association of California city officials who work together to enhance their knowledge and skills, exchange information, and combine resources so that they may influence policy decisions that affect cities.” http://www.cacities.org/index.jsp?displaytype=&section=about&zone=locc. League at 20. Specifically, the League demanded that Alternative Planning Strategies not be included in Regional Transportation Plans. The implications of this amendment are discussed in detail below.

69 Margot Roosevelt, “Legislature Takes Aim at Urban Sprawl,” *Los Angeles Times*, 21 Aug. 2008; http://articles.latimes.com/2008/aug/21/local/me-sprawl21.

70 Tony Bizjak, “Fate of Steinberg Warming Bill Up in the Air,” *The Sacramento Bee*, 28 Sep. 2008; http://www.sacbee.com/101/story/1271584.html.

71 SB 375 is complex legislation that makes numerous intricate changes to the planning processes in California. The discussion herein will not attempt to analyze SB 375 in depth, but will instead focus on the key elements relevant to public transportation. For excellent and extensive discussions of SB 375, see Prof. Cara Horowitz’s chapter earlier in this edition of *California Policy Options*; League, Technical Overview, at http://www.cacities.org/resource_files/27223.SB%20375%20Implementation%20Final%209-19-08(1.1).pdf; and John Darakjian, “SB 375: Promise, Compromise and the New Urban Landscape,” *UCLA Journal of Environmental Law and Policy*, vol. 27, p. 371 (2009).

72 League at 1-2.

73 Id. at 14.

74 Id.

75 California Department of Housing and Community Development, http://www.hcd.ca.gov/hpd/hrc/plan/he/.

76 League at 14.

77 SB 375 § 4(b)(2).

78 League at 6-7.

79 Id. at 4.

80 Id.

81 Id. at 5.

82 Id.

83 Id.

84 Id. at 8.

85 Id.

86 Id.

87 I.e., general plans, specific plans, and zoning.

88 League at 5-6.

89 Id. at 5.

90 CAL. PUB. RES. CODE § 21000 et seq. CEQA: Summary, http://ceres.ca.gov/topic/env_law/ceqa/summary.html.

91 Wyatt Buchanan, "Whitman Would Suspend AB32", *San Francisco Chronicle*, 17 Sept. 2009; http://www.sfgate.com/cgi-bin/blogs/nov05election/detail?blogid=14&entry_id=47872.

92 League at 12.

93 SB 375 also creates incentives for SCS/APS consistent projects that do not meet the transit-oriented requirements of TPPs. *See id*.

94 CAL. PUB. RES. CODE § 21155(b).

95 *See* Mitchell, at 60-61.

96 http://www.sos.ca.gov/elections/sov/2008_general/7_votes_for_against.pdf.

97 "What is Proposition 1A?," *California High-Speed Rail Authority*; http://www.cahighspeedrail.ca.gov/faqs/proposition-1a.htm.

98 "Measure R Information Guide," *MTA*; http://www.metro.net/measurer/default.asp.

99 http://rrccmain.co.la.ca.us/0018_CountyMeasure_Frame.htm.

100 "Measure R Information Guide," *MTA*; http://www.metro.net/measurer/default.asp.

101 "Measure R Project Index," *MTA*; http://www.metro.net/measurer/project_index.html.

102 "Project Overview – Capital Funding," *Valley Transportation Authority*; http://www.vta.org/bart/funding.html.

103 Id. A previous sales tax measure, Measure A, passed in 2000, pays in part for the construction of the extension.

104 "What is SMART?", *Sonoma Marin Area Rail Transit*; http://www.sonomamarintrain.org/index.php/what_is_smart/.

105 Id.

106 Id.

107 Id.

108 William Jason, "SMART, Creative Housing Reach Tentative Agreement on Railroad Square," *North Bay Business Journal* (18 Oct. 2007); http://www.busjrnl.com/article/20071018/BUSINESSJOURNAL/71018009/1209.

109 Transbay Transit Center; http://www.transbaycenter.org/transbay/.

110 Gary Richards, "BART Backers Pop Open Champagne, Celebrate Vision for San Jose's Grand Central Station," *San Jose Mercury News* (21 Nov. 2008).

111 Mark Baldassare et al., *Californians & the environment*, (Public Policy Institute of California: 2009); http://www.ppic.org/content/pubs/survey/S_709MBS.pdf.

112 This is not meant to suggest that throwing money at transit providers will automatically lead to realizing all of the benefits of public transit discussed earlier. Transit funding must be utilized intelligently to maximize ridership and benefits to constituents. In addition to traditional ridership modeling, the coordinated regional planning envisioned by SB 375 should guide the deployment of increased transit funds.

113 SANTA CLARA VTA ADOPTED BIENNIAL BUDGET FISCAL YEARS 2008 AND 2009 at 35 (2007), *available a*t http://www.vta.org/inside/investor/financial/statements/fy08and09_budget_book.pdf; LA MTA ADOPTED BUDGET FY2008 at II-6 (2006), *available at* http://www.metro.net/about_us/finance/images/budget_adopted_fy08.pdf.

114 For one columnist's discussion on the difficulty of this challenge, see David Lazarus, "U.S. Public Transit Improvements Will be a Tough Sell," *Los Angeles Times*, Aug. 5, 2009; http://articles.latimes.com/2009/aug/05/business/fi-lazarus5.

115 *See, e.g.*, Charles Krauthammer, "At $4, Everybody Gets Rational," *Washington Post*, June 6, 2008; http://www.washingtonpost.com/wp-dyn/content/article/2008/06/05/AR2008060503434.html (noted conservative columnist Krauthammer advocates for higher energy taxes and a price floor of $4 on gasoline, with accompanying reductions in payroll taxes).

116 Ellen Hanak, *Paying for Infrastructure: California's Choices 2025*, (Public Policy Institute of California: Jan. 2009), 10-11; http://www.ppic.org/content/pubs/atissue/AI_109EHAI.pdf.

117 *California 2025* at 147.

118 *California 2025* at 141.

119 Louise Bedworth and Ellen Hanak, *Planning for a Better Future: California 2025 – Transportation*, (Public Policy Institute of California: July 2009), 2; http://www.ppic.org/content/pubs/report/R_709LBEHR.pdf.

120 Louise Bedworth and Ellen Hanak, *Planning for a Better Future: California 2025 – Transportation*, (Public Policy Institute of California: July 2009), 3; http://www.ppic.org/content/pubs/report/R_709LBEHR.pdf.

121 Sarah E. West, "Should Distributional Considerations Hold Up Higher Gasoline Taxes?", *Resources for the Future*, June 22, 2009; http://www.rff.org/Publications/WPC/Pages/09-06-22-Should-Distributional-Considerations-Hold-Up-Higher-Gasoline-Taxes.aspx.

122 *California* 2025 at 147-48.

123 Louise Bedworth and Ellen Hanak, *Planning for a Better Future: California 2025 – Transportation*, (Public Policy Institute of California: July 2009), 2; http://www.ppic.org/content/pubs/report/R_709LBEHR.pdf.

124 The legislative counsel's digest of SB 406 is available at: http://www.aroundthecapitol.com/Bills/SB_406/.

125 The veto message for SB 406 is available at: http://www.leginfo.ca.gov/pub/09-10/bill/sen/sb_0401-0450/sb_406_vt_20091012.html.

126 *See, e.g.*, UCLA Institute of Transportation Studies, directed by Brian Taylor. http://www.its.ucla.edu/.

127 The Scoping Plan for AB 32, which discusses the proposed cap-and-trade system in detail, is available at http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm.

128 Professor Shoup's research is available at http://shoup.bol.ucla.edu/.

129 Donald Shoup, "The High Cost of Free Parking," *San Francisco Chronicle*, June 3, 2005; http://www.sfgate.com/cgi-bin/article.cgi?file=/c/a/2005/06/03/EDGFGD1VQ61.DTL.

130 Ibid. One such pilot project is SFpark, in San Francisco. http://www.sfmta.com/cms/psfpark/sfparkindx.htm.

131 Ibid.

132 Ari B. Bloomekatz, "Villaraigosa Has Bullish Plan for Rail Transit Projects," *Los Angeles Times*, Oct. 29, 2009; http://latimesblogs.latimes.com/lanow/2009/10/villaraigosa-has-bullish-plan-for-la-rail-transit-projects.html.

133 Metro ExpressLanes, http://www.metro.net/projects_studies/expresslanes/index.htm.

134 Ibid.

135 Ibid. (click on "News & Info").

136 Ibid.

4

HARNESSING THE MARKET TO DISCOURAGE SPRAWL IN CALIFORNIA

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Urban planners have long attempted to mandate reductions in "sprawl", but they often run afoul of both consumer preferences for detached homes and existing land use policies (exclusionary zoning). A better approach would be to work with the market, not against it. A period of deep recession presents an ideal opportunity to put in place new policies to avoid repeating past mistakes.

Most of the overbuilding in California in the first half of the decade occurred on the urban fringe. Thousands of excess homes led to one of the nation's highest foreclosure rates, which aggravated an already steep economic downturn. This overbuilding wasted not only economic resources, but also natural resources. Policy innovations which can encourage denser infill development can help make the next boom more economically and environmentally responsible.

"Smart districts," modeled after redevelopment areas (RDAs), would allow some fraction of tax revenues generated inside the district to be retained for reinvestment in infrastructure or amenities for districts that commit to higher density development. The critical assumption is that richer amenities and infrastructure will attract private investment, and thereby encourage faster economic growth. This chapter estimates the economic impact of such districts if implemented statewide.

Based on the historical experience of California's redevelopment areas, it is reasonable to assume that the average smart district will, conservatively, accelerate economic growth within its boundaries by 4.6% to 8.3% per year. If implemented on a moderate to large scale, this additional growth will translate to an increase of 1,300 to 12,300 jobs per year; $95 to $885 million in personal income per year; and $124 million to $1.1 billion in added gross state product per year.

Critics may argue that this faster growth comes at the expense of smart districts' parent (surrounding) jurisdictions, because those parents "subsidize" the

districts by allowing them to keep a portion of locally-generated revenues. In fact, such "subsidies" are in the parents' interest: The accelerated economic growth is estimate to generate one to three dollars of added revenue per dollar of subsidy. This 100% to 300% return on investment is far above any creditworthy jurisdiction's typical borrowing rate, even in a credit crunch.

Land-use mandates are largely ineffective and have significant adverse environmental side-effects. If, instead, market incentives are used to encourage such higher density development, they will eliminate the usual tradeoff between environmental and economic benefits. Further, using a market mechanism minimizes the chance of failure that has followed so many "new urbanist" and "transit oriented development" schemes which fundamentally rely on mandates (coercion). Smart districts can help make California's inevitable future growth more responsible—and also more prosperous.

CONVENTIONAL POLICIES TO CONTAIN SPRAWL

"Sprawl"—the horizontal spread of urbanized areas into formerly rural land--has become a bugbear in numerous land-use planning debates. Where once the opponents of sprawl were mainly concerned about aesthetics, the list of charges against it has grown. The reduction in walking opportunities and increased dependence on automobiles (and longer commutes for working parents, leaving them less time to attend to their children) has associated sprawl with a variety of pathologies. These negative impacts include air pollution, climate change, obesity, reduced social cohesion, and even reduced educational performance.[2] Further, the housing bust that began in 2007 largely originated in exurban communities, so sprawl can cause economic as well as environmental and social damage.

Attempts by land-use officials to mandate "smart growth" or "transit oriented development"—i.e., growth in which the new construction is at higher densities than existing urbanization, to facilitate transit and pedestrians and make automobiles less necessary—have often failed. Sometimes failure occurs because the high-density urban environments beloved of smart growth advocates are appealing to only a small segment of the market.[3] Often failure occurs because existing zoning mandates *maximum*, not *minimum* densities; these regulations are termed "exclusionary" zoning because their proscriptions on higher densities effectively price non-incumbents out of the market.[4] So anti-sprawl advocates are working against powerful forces.

Those forces in California shifted development inland from the exclusionary (and consequently expensive) coast. This shift fueled not only environmental degradation from sprawl, but also rapid increases in housing prices in the first half of the decade, especially in the state. The result was an industry crash which helped cause a deep general recession.

A period of deep recession presents an ideal opportunity to put in place new policies to avoid repeating past mistakes. Most of the overbuilding in California in the first half of the decade occurred on the urban fringe. Thousands of inland excess homes led to one of the nation's highest foreclosure rates, which aggravated an already steep economic downturn. This building wasted not only economic resources, but also natural resources. Policy innovations which can encourage denser infill development can help make the next boom more economically and environmentally responsible.

A DIFFERENT APPROACH

Only a fraction of housing buyers prefer to live in high-density environments. Zoning mandates are a very blunt and sometimes counterproductive instrument for steering the market to provide such environments. Thus, a superior alternative is to work *with* the market, not against it. There are many ways to intervene to change incentives and encourage individual consumers or developers to pursue smarter-growth development. This chapter examines the economic impacts of one approach, dubbed "Smart Districts."

Smart districts[5] are inspired by a very common policy mechanism: use of the tax code to encourage desired behavior, or to discourage the opposite. There are many examples. For instance, the deductibility of charitable contributions on income taxes has undoubtedly contributed to the United States' position as having the highest rate of charitable donations (as a share of income) in the industrialized world.

The boom in sales of hybrid automobiles in the middle of the 2000s was facilitated by a generous tax credit that led Toyota, for example, to maintain a lengthy waiting list for its Prius. Subsequently, the 2009 "cash for clunkers" program, which used a subsidy similar to a tax credit to encourage trade-ins of fuel inefficient vehicles in favor of more efficient new models, exhausted after only a week of operation its first tranche of funding that was intended to last four months. In principle, some tax incentive, on either the demand side (homebuyers) or the supply side (developers) should encourage changes in development patterns to reduce future sprawl.[6]

There are numerous ways such incentives could be designed. The Smart District idea borrows from an existing practice: redevelopment areas (RDAs). RDAs, which were first innovated in California and since have been copied in most other states, may be declared in any "blighted" area.[7] Once an RDA is declared, thereafter some fraction of the property taxes generated within its boundaries, above the amount generated in a base year (i.e., "incremental"), may be retained for reinvestment inside its borders. The retention is a departure from the usual practice of transferring those revenues to the parent, city, county, and state.[8] Proponents argue that the reinvestment is necessary to provide the RDA, which is generally in an economically unattractive location (if not literally "blighted") a fighting chance to achieve rates of economic growth similar to or higher than the surrounding area. The more extravagant advocates argue that RDAs are necessary to propel the outsized economic growth needed to overcome the area's disadvantages.

Opponents of redevelopment argue that RDAs add little to economic growth, and mainly provide a tax subsidy to favored developers—of, for instance, sales tax-generating properties such as retail shopping malls and auto dealerships. The economic criticisms, at least, seem weak. Based on the sample of RDAs used in the analysis in this chapter, economic activity inside redevelopment districts (as captured by the assessed value of all real property in the district's boundaries) expands at a rate between 2% and 5% *faster* than the surrounding county. Since nominal growth (i.e., not adjusted for inflation) of GDP statewide in an average year varies between about 3% and 7%,[9] growth rates within RDAs are between half again to more than double that of non-RDA areas.

SMART DISTRICTS

Under the Smart District concept, RDA-like districts would be established, but with different eligibility criteria. To be eligible for smart district designation, instead of the subjective and inevitably controversial "blight", land use authorities in the governing

jurisdiction would commit to (and zone for) higher density development inside the district than in the surrounding region. For the purpose of this discussion, we will assume that the density difference must be a least a factor of two—that is, new development in the district much generate twice the dwellings per acre as the area outside the district. In practice, any density differential is possible, and should be based on market research as to what level buyers will accept.

Designation could be made by local governing bodies (e.g., city councils), or there could be a statewide competitive process, as with enterprise zones. Furthermore, the district's location must be "landlocked"—that is, surrounded by already-urbanized area, so that new development "infills" among existing urbanization. Clearly, these criteria and the establishment process can be refined. Other eligibility criteria may be added as this concept is legislated.

"Smart growth" (anti-sprawl) proponents should find this idea promising. Through increased densities, they can encourage pedestrian/transit friendly environments with all the advantages the advocates profess. "Transit-oriented development" (TOD) is a fashion in land use circles, but rarely are TODs designed holistically, in a way that intelligently encourages transit use. Smart districts do so not with regulatory mandates, which rarely can trump the market and often are counterproductive, but by giving the market a gentle inducement in the desired direction. Transit stops will likely be a normal feature of smart districts, since they will enhance the districts' attractiveness to developers.

Within these districts economic growth can be accelerated, at least theoretically. Residents' recurring living costs will be lower (because of less frequent need for automobile trips, a particular advantage at a time of high gasoline prices and slow or negative economic growth). If development inside smart districts includes mixed residential, commercial, and office use, some residents may live close to work. All residents would have an opportunity to experience the vibrant urban living epitomized by Greenwich Village or Soho in New York, South of Market or North Beach in San Francisco, or the Pearl District in Portland, Oregon. While such environments are clearly not for all tastes, they tend to be attractive to what Prof. Richard Florida has termed "the creative class."

The creative class refers to writers, artists, software engineers, and multimedia specialists who are typically well-educated and therefore have above-average incomes (and spending). In their early and late careers they are often without children, and thus more attracted to such environments. "Creative class" economic strategies have become fashionable, especially in many left-leaning large cities. While some observers doubt their effectiveness,[10] it seems evident that they will succeed for *some* market segment. Smart districts would allow cities to encourage the development of environments to attract a share of this market.

ECONOMIC CONCERNS

Smart districts' attractiveness to prospective residents (and therefore to developers) will be substantially enhanced through tax preferences. RDAs provide a model: Smart districts can be permitted to retain some fraction of the incremental revenues generated by development within the district boundaries. For RDAs, the revenues in question are property taxes, but in principle, the concept could apply to any type of district-generated tax revenue. For example, it could also include sales taxes collected at a point of sale in the district, or personal or corporate income taxes collected from resident individuals and businesses in the district.

The fiscal arrangements between redevelopment areas and parent cities and counties remain controversial, with the parents arguing that they are responsible for a range of expensive services that aren't fully covered by the share of district-generated taxes they are permitted to receive. In an attempt to limit abuse, state law puts a ceiling on the number of years an RDA can exist.[11] By the same token, governance needs careful design to assure accountability for the funds spent within the district. Alternative governance models, including special districts such as business improvement districts, may be a more promising governance approach than the RDA model, although this author approves of a long sunset provision to encourage capital investment (perhaps 50 years).

Any retention of revenues by the district represents an implicit subsidy by its parent jurisdictions (which would otherwise have received those revenues). From their parents' perspectives, the burden of proof is on the district to demonstrate the remaining revenues that parent jurisdictions receive are more than they would have received if the district did not exist. In other words, smart districts need to demonstrate that they accelerate economic growth, and thus revenue growth.

OBJECTIVES AND ANALYSIS

This chapter evaluates the economic consequences of creation of one or more such smart districts in California. Its purpose is to approximately estimate the economic benefits if some fraction of revenues generated inside a district were allowed to be retained for reinvestment, such as on public amenities (e.g., parks) or on infrastructure.[12] The assumption is that smart districts with more extensive endowments of these things will be more attractive to desirable residents, and therefore to developers. As residents and developers respond to these incentives, they will generate greater economic growth than would occur without the district. Thus, the theory goes, these districts will have economic as well as land-use benefits.

The empirical estimates are based on the historical experience of redevelopment areas in California. These RDAs are the closest existing analogues to smart districts. Economic growth was computed for a sample of 22 RDAs,[13] and compared to economic growth in the surrounding county to determine the degree to which RDAs actually accelerated growth.[14] The added growth attributable to RDAs was then adjusted (subjectively) to approximate the differences, positive and negative, between smart districts and RDAs.

Why do RDAs grow faster than the rest of the state? It is not because they are initially endowed with favorable characteristics—quite the opposite. A reasonable assumption is that the added infrastructure and amenities that retained incremental tax revenue makes the RDAs a more attractive location for private investment. That investment then raises the value of nearby property as it raises local economic activity and incomes. The evidence summarized below seems to confirm this assumption.

HOW SMART DISTRICTS ARE DIFFERENT FROM REDEVELOPMENT AREAS

While RDAs are the closest extant model, they are an imperfect proxy for projecting the economic impact of smart districts. This section summarizes some of the key differences.

Negative differences (i.e., reasons why smart districts' economic impact would be less than RDAs)

1. A 1998 review of RDAs by the Public Policy Institute of California (PPIC) found that the fastest-growing districts in its sample were those that contained considerable undeveloped land.[15] They were essentially *development*, not redevelopment districts. By contrast, all smart districts would be established in already-developed areas, so the value they could add will be more limited than those RDAs that had a completely undeveloped base.
2. To be attractive to their target market, smart districts could not be zoned for quite as wide a range of uses as can RDAs. For example, it is unlikely that industrial uses would attract the desired residents.

Positive differences

3. RDAs start with significant handicaps, since they are typically established in troubled ("blighted") areas. By contrast, the areas for which smart districts would be best suited are those that can readily be made attractive to residents and, therefore, profitable for developers.
4. Smart districts that attract residents of above-average incomes (creative class) will be the wellsprings for substantial economic activity through those residents' spending.
5. Smart districts that are mixed-use—which will likely be the common pattern—will have considerable retail activity as residents patronize stores and restaurants near (by design, within transit or walking distance) their homes.
6. The likely absence of industrial uses in these districts precludes the negative impact on neighboring property values that often accompanies industrial development.

For the purposes of this chapter, we will assume that the net effect of the above differences means that the *average* smart district will add growth at a rate equal to the historical record of the median of the sample RDAs (which is lower than their mean). We consider this a *conservative* assumption, because we believe that the positive differences noted above are of greater magnitude than the negative ones. Therefore, readers should treat the estimates that follow as a credible *lower bound* on actual economic effects—that is, smart districts' actual effects will likely be *higher* than those presented.

Another rough analog is enterprise zones (EZs). These are special areas in which companies which locate inside a zone are taxed at a lower rate than they would be otherwise, in order to attract businesses to depressed areas. EZs' economic effectiveness have also been disputed. But EZs have a great handicap relative to smart districts: they are usually located (when not abused) in disadvantaged areas; whereas developers will only locate smart districts in areas they believe can have competitive advantages for attracting residents. So again, it is reasonable to assume that smart districts will have superior economic performance to EZs.

Nevertheless, not all smart districts will succeed. The landscape is littered with planning schemes based on mistaken assumptions about the market's response to urban designs. Later sections of this chapter will discuss findings for two groups of scenarios: (a) where 60% to 90% of smart districts are "successful" (i.e., grow at the rate projected), and where only 20-50% succeed.[16] Even the lower number assumes that the jurisdictions that create a smart district do so only after considerable market research.

FINDINGS

Over the period between 1996 to 2002 (two years at roughly the same point—early in a recovery--in two California economic cycles), economic growth in the sample of redevelopment areas (RDAs) exceeded that of their surrounding counties by a mean of 5.3% and

a median of 2.1% per year. If a typical district was permitted (as RDAs are under AB 1290) to keep 67% of its incremental property tax revenues (and conservatively considering only property tax revenues in this fiscal impact analysis), the parent jurisdictions would see 100% to 300% more revenues than the subsidy they provide to the district: a return on their "investment" of 100 to 300%, depending on whether the historical mean or median rate of added annual growth is used. In other words, it would take between 15 years and 25 years for the investment to break even (for the added revenues from economic growth attributable to the RDAs to equal the revenue they retained).

Appendix A displays the results of our findings about how much added economic growth has been associated with RDAs historically, and Appendix B outlines the return on investment and breakeven computations to parent jurisdictions.

To apply these to smart districts, we specified the following scenarios:

1. Early implementation/high success:
   Smart districts contain 1% of the state's development, and 90% of these are successful.
2. Maturation/high success:
   Smart districts contain 10% of state development; 60% of these are successful.
3. Early implementation/limited success:
   Smart districts contain 1% of state development, and 50% are successful.
4. Maturation/limited success:
   Smart districts contain 10% of the state's development, and 20% of these are successful.

The scenarios make the plausible assumption that as smart districts scale up and proliferate throughout California (i.e., go from containing 1% in early implementation to 10% of state assessed value in maturity), the probability of success will drop. That is, the most promising locations for districts will probably be used first; and the program will reach diminishing returns later.

By way of background, RDAs' share of total state assessed value declined from 49% to 9% in the years from 1996 to 2002.[17]

Table 1 summarizes the four scenarios.

Table 1. Scenario Summary

Scenario of Success	% of State Assessed Value in Smart Districts	% of Smart Districts Assumed Successful
1. Early/High	1%	90%
2. Mature/High	10%	60%
3. Early/Mod.	1%	50%
4. Mature/Mod.	10%	20%

So we will assume that 0.9% (1% x 90%) of the state's assessed value is located inside successful smart districts under Scenario #1; 6% in #2; 0.5% in #3, and 2% in Scenario #4.

SPECIFIC ECONOMIC BENEFITS OF SMART DISTRICTS

To recapitulate, our analysis assumes that assessed value within smart districts will grow at an annual rate of between 2.1% and 5.3% faster than the overall economy. Most long-term projections of the California's economy expect it to grow between 2.5% and 3% per year. So a successful smart growth district's assessed value will grow between 4.6% and 8.3% per year. We will assume that other measures of economic activity, such as employment, personal income, or output (gross state product), grow at roughly the same rate as assessed value. Baseline statistics for assessed value, gross state product, employment, and personal income are shown in Table 2. These data are from 2005, the latest year for which authoritative state data were available when this chapter was first drafted.

Table 2. 2005 Statewide Baseline Values

Assessed Value:	$3,193,623 million (2005)
Gross State Product:	$1,550,753 million (2004)
Personal Income:	$1,184,997 million (2003)
Employment:	16,460,000 jobs (2004)

Source: Department of Finance, *California Statistical Abstract*, 2005 ed.

As mentioned, economic aggregates are assumed to scale with property values. Clearly this is not always true; for example, property values often fall farther in a recession or rise faster in a boom than does, say, employment or personal income. But over the long term it is reasonable to expect a fairly stable relationship. With this in mind, Table 3 displays estimates of the annual benefits of smart growth districts (i.e., accelerate growth) under our four scenarios.

Table 3. Growth in Economic Aggregates for Smart District Scenarios

Scenario	Assessed Value In Successful Smart Districts	Annual growth in: Jobs	Pers. Income	Output (GSP)
1	0.9%	12,300	$885 M	$1,158 M
2	6.0%	8,200	590 M	772 M
3	0.5%	3,300	237 M	310 M
4	2.0%	1,300	95 M	124 M

Assumes that average growth in smart districts is between 4.6% (scenarios 3 and 4) and 8.3% (scenarios 1 and 2) per year, based on the range revealed by our analysis of RDA experience. Relative relationships among scenarios may not be quite consistent due to rounding. GSP = Gross State Product, the sum of all goods and services produced in California.

To put these numbers in perspective, median household income in California was $49,320 in 2003,[18] so smart districts have the potential to stimulate enough added personal income for 2,000 to 18,000 families—*per year.*

Skeptics may argue that the numbers in Table 3 are high, because they implicitly assume that accelerated growth in smart districts does not come at the expense of slower growth elsewhere in the state outside the districts' boundaries. The premise is reasonable: some within-district growth merely reflects a shift from outside of districts to inside. But since this analysis is based on the historical experience of RDAs, it assumes no more and no less such shifting than RDAs encountered historically.

CONCLUSION

Creation of special "smart districts" in California—in which district status is granted to areas that agree to permit higher densities than surrounding areas in exchange for the right to keep a fraction of the revenue generated therein—can have economic benefits in addition to non-economic ones. Depending upon the pace at which districts are created and on their success in the marketplace, smart districts could be responsible for annual increases in gross state product of between $124 million and nearly $1.2 billion. These increases may not seem large in a state economy that grows by over $30 billion per year (in a normal year). But with this output growth will come new jobs—between 1,300 and 12,300 per year.

If market incentives, as opposed to land-use mandates, are used to encourage higher density development, they will eliminate the usual tradeoff between environmental and economic benefits. Further, using a market mechanism minimizes the chance of failure that has followed so many "new urbanist" and "transit oriented development" schemes which rely on coercion. Smart districts can help make California's inevitable future growth more responsible—and also more prosperous.

Added Economic Growth Attributable to Sample Redevelopment Districts, 1996-2002

County	District	Assessed Value 1996-7 ($)	Assessed Value 2002-03 ($)	Assessed Value Growth/Yr
Fresno	Mariposa	$79,933,610	NA--Merged?	
Fresno	Kingsburg	$33,500,350	$54,886,007	7.3%
Fresno	All county RDAs	$2,333,148,652	$4,314,811,785	9.2%
	County PI growth			
LA	Puente-Merced	$39,675,937	NA	
LA	Burbank	$514,681,000	$605,751,923	2.4%
LA	Culver City	$1,687,686,440	$2,762,642,108	7.3%
LA	Santa Fe	$111,588,136	$138,642,595	3.1%
LA	Beacon Street	$64,373,000	$88,948,000	4.7%
LA	Little Tokyo	$271,498,000	$254,939,000	-0.9%
LA	All county RDAs	$76,176,672,787	$112,346,729,359	5.7%
	County PI growth			
Marin	San Rafael	$1,175,247,100	$1,720,575,389	5.6%
Marin	All county RDAs	$1,479,376,877	$2,821,946,543	9.7%
	County PI growth			
Orange	Buena Park	$247,451,975	$1,005,488,960	22.2%
Orange	All county RDAs	$21,391,900,403	$34,527,411,331	7.1%
	County PI growth			
Placer	Roseville	$184,379,039	$417,573,339	12.4%
Placer	All county RDAs	$492,080,055	$2,201,547,532	23.9%
	County PI growth			
Riverside	County Proj # 1	$53,586,155	NA--merged?	
Riverside	Coachella # 3	$115,607,457	$137,067,443	2.5%
Riverside	Moreno Valley	$1,061,085,739	$1,141,558,437	1.0%
Riverside	Sycamore Cyn	$130,749,364	NA	
Riverside	All county RDAs	$21,999,073,915	$38,530,626,124	8.3%
	County PI growth			

Personal Income 1996-7 ($M)	Personal Income 2002-3 ($M)	Personal Income Growth/Yr	Net RDA effect
			2.1%
$14,430	$20,651	5.3%	
			-2.5%
			2.4%
			-1.7%
			-0.2%
			-5.8%
$222,773	$311,285	4.9%	
			0.5%
$11,395	$16,190	5.1%	
			16.2%
$77,499	$116,238	6.0%	
			4.1%
$6,153	$10,751	8.3%	
			-4.7%
			-6.1%
$27,565	$44,627	**7.1%**	

San Bern.	Inland Valley	$1,883,372,936	$2,243,838,469	2.5%
San Bern.	Chino	$264,282,224	$1,198,120,736	24.1%
San Bern.	Proj. #3	$268,565,027	$436,440,856	7.2%
San Bern.	All county RDAs	$23,641,375,869	$34,118,323,742	5.4%
	County PI growth			
San Diego	San Marcos #1	$702,654,378	$1,035,809,595	5.7%
San Diego	All county RDAs	$15,567,409,305	$27,657,118,641	8.6%
	County PI growth			
San Fran	Rincon-So Bch	$305,494,000	$1,240,786,000	22.2%
San Fran	All county RDAs	$3,062,046,000	$6,968,034,458	12.5%
	County PI growth			
San Mateo	E P Alto Ravenswood + 101	$60,650,900	$259,232,398	23.1%
San Mateo	Foster City	$786,659,191	$1,456,232,925	9.2%
San Mateo	All county RDAs	$5,108,275,087	$10,940,509,244	11.5%
	County PI growth			
S Clara	San Jose	$7,680,817,524	$18,732,943,658	13.6%
S Clara	All county RDAs	$12,340,697,586	$27,878,019,206	12.3%
	County PI growth			
Solano	Vacaville	$393,020,156	$1,442,373,628	20.4%
Solano	All county RDAs	$4,951,438,003	$7,181,406,264	5.5%
	County PI growth			
Stanislaus	Modesto	$693,844,712	$872,354,117	3.3%
Stanislaus	All county RDAs	$2,697,073,479	$4,082,751,742	6.1%
	County PI growth			
Yolo	Woodland	$203,725,248	$243,635,594	2.6%
Yolo	All county RDAs	$1,938,474,773	$2,975,074,296	6.3%
	County PI growth			

Note: “PI” = personal income

Summary of effects (added growth/yr)

Median Net RDA effect	**2.05%**	**Per year**
Mean Net RDA effect	**5.31%**	**Per year**

			2.5%
			24.1%
			7.2%
$29,450	$44,772	6.2%	
			-1.1%
$65,881	$104,614	6.8%	
			16.7%
$28,832	$41,897	5.5%	
			18.5%
			4.6%
$26,952	$36,941	4.6%	
			8.2%
$54,169	$78,165	5.4%	
			20.4%
$8,009	$12,456	6.5%	
			-2.5%
$8,036	$11,920	5.8%	
			-2.6%
$3,568	$5,081	5.2%	

Author's calculations based on data from: State Controller's Office, Community Redevelopment Agencies Annual Report, 1996-97 and 2002-03; and Department of Finance, California Statistical Abstract, 2005.

Smart districts, like redevelopment areas, retain a portion of locally-generated revenues and "pass through" the rest to parent jurisdictions. Since absent such districts, the parent(s) would receive all revenues, districts can be considered to be receiving a "subsidy" from the parent(s). This subsidy has been one of the sources of opposition to redevelopment areas.

But as the saying goes, it takes money to make money. Revenues that are retained by a district to accelerate economic growth will also accelerate tax revenues. The fair question to ask is: *Do the added revenues from that acceleration equal or exceed the subsidy provided (through foregone revenue) by the parent(s)?* If they do, then the parent is earning a positive return on its "investment".

Typically investment analyses compute the increased revenues resulting from some up front investment, and compare the former to the latter. A "return on investment" (ROI), expressed as a percentage, captures the excess revenues generated over and above the upfront cost. The ROI is usually compared to the rate at which the jurisdiction borrows money. If the investment's ROI is greater than the jurisdiction's borrowing rate, the investment is worthwhile (the investor/jurisdiction makes a profit).

The table in Appendix B outlines the investment computation for a hypothetical district under two scenarios, high and low growth, based respectively on the mean and median growth acceleration achieved historically by redevelopment areas. In the "high" scenario, smart districts grow at 8.3% per year, vs. 4.6% in the "low" scenario. Starting from an initial illustrative assumption of $10 million in tax revenues (67% retained by the district—i.e., "subsidized"— and 33% passed through to parents), revenues grow thereafter at 8.3% or 4.6% per year.[19] The "Parent's Cumulative Subsidy" column shows the accumulated revenues foregone by the parent jurisdictions—i.e., that subsidize the district. The "Extra Revenue" column indicates those revenues received by the parent jurisdiction which would not exist but for the accelerated growth created because of the district. The "Parent's Cumulative Benefit" column accumulates the prior column. When "Parent's Cum Benefit" reaches the level of "Parent's Cum Subsidy", the parent jurisdiction has broken even. That year is shown in bold within the table: it occurs after 15 years in the "high" scenario and 25 years in the "low" scenario.

Finally, return on investment is calculated by discounting all cashflows, subsidy and "extra revenue", to account for the time value of money, then comparing the net present value (NPV) of the sum of each, computed over 30 years.[20] We used a discount rate of 7%, which is approximately the rate of most local jurisdictions. Dividing "cum benefits" by "cum subsidy" produces the return on investment (ROI): 103% in the low growth scenario, and 304% in the high growth scenario. Both ROIs are far above any creditworthy California jurisdiction's borrowing rate, even in a credit crunch. **Thus, smart districts are a good investment to the parent jurisdiction, which gets back two to four dollars in added revenue for every dollar they forego for "subsidy".**

Computation of Return on Investment to Parent Jurisdictions

Parent Jurisdiction ROI Computation (dollars in millions)

Assumed pass-through rate:	33.0%
Assumed economic (& revenue) growth rate—-high	8.3%
Assumed economic (& revenue) growth rate—-low	4.6%
Discount rate:	7.0%

LOW GROWTH SCENARIO

Year	District Revenues	Parent Revenues Received	Total revs		Parent's Cum Subsidy	Parent's Extra Rev	Parent's Cum Benefit
1	$3.30	$6.70	$10.00		$3.30	$0.00	$0.00
2	$3.45	$7.01	$10.46		$6.75	$0.31	$0.31
3	$3.61	$7.33	$10.94		$6.91	$0.32	$0.63
4	$3.78	$7.67	$11.44		$7.08	$0.34	$0.97
5	$3.95	$8.02	$11.97		$7.25	$0.35	$1.32
6	$4.13	$8.39	$12.52		$7.43	$0.37	$1.69
7	$4.32	$8.78	$13.10		$7.62	$0.39	$2.08
8	$4.52	$9.18	$13.70		$7.82	$0.40	$2.48
9	$4.73	$9.60	$14.33		$8.03	$0.42	$2.90
10	$4.95	$10.04	$14.99		$8.25	$0.44	$3.34
11	$5.17	$10.50	$15.68		$8.47	$0.46	$3.80
12	$5.41	$10.99	$16.40		$8.71	$0.48	$4.29
13	$5.66	$11.49	$17.15		$8.96	$0.51	$4.79
14	$5.92	$12.02	$17.94		$9.22	$0.53	$5.32
15	$6.19	$12.58	$18.77		$9.49	$0.55	$5.88
16	$6.48	$13.15	$19.63		$9.78	$0.58	$6.45
17	$6.78	$13.76	$20.54		$10.08	$0.61	$7.06
18	$7.09	$14.39	$21.48		$10.39	$0.63	$7.69
19	$7.41	$15.05	$22.47		$10.71	$0.66	$8.35
20	$7.76	$15.75	$23.50		$11.06	$0.69	$9.05
21	$8.11	$16.47	$24.58		$11.41	$0.72	$9.77
22	$8.49	$17.23	$25.71		$11.79	$0.76	$10.53
23	$8.88	$18.02	$26.90		$12.18	$0.79	$11.32
24	$9.28	$18.85	$28.13		$12.58	$0.83	$12.15
25	**$9.71**	**$19.72**	**$29.43**	***Low* Brkeven**	**$13.01**	**$0.87**	**$13.02**
26	$10.16	$20.62	$30.78		$13.46	$0.91	$13.92
27	$10.63	$21.57	$32.20		$13.93	$0.95	$14.87
28	$11.11	$22.56	$33.68		$14.41	$0.99	$15.86
29	$11.63	$23.60	$35.23		$14.93	$1.04	$16.90
30	$12.16	$24.69	$36.85		$15.46	$1.09	$17.99
	NPV:	**$105.74**	**$214.74**			**ROI:**	**103%**

Years To Cover Subsidy From Parent Jurisidictions

At median RDA effect (added growth per year)	25
At mean RDA effect (added growth per year)	15

HIGH GROWTH SCENARIO

Year	District Revenues	Parent Revenues Received	Total revs		Parent's Cum Subsidy	Parent's Extra Rev	Parent's Cum Benefit
1	$3.30	$6.70	$10.00		$3.30	$0.00	$0.00
2	$3.57	$7.26	$10.83		$6.87	$0.56	$0.56
3	$3.87	$7.86	$11.73		$7.17	$0.60	$1.16
4	$4.19	$8.51	$12.70		$7.49	$0.65	$1.81
5	$4.54	$9.22	$13.76		$7.84	$0.71	$2.52
6	$4.92	$9.98	$14.90		$8.22	$0.77	$3.28
7	$5.32	$10.81	$16.14		$8.62	$0.83	$4.11
8	$5.77	$11.71	$17.47		$9.07	$0.90	$5.01
9	$6.25	$12.68	$18.92		$9.55	$0.97	$5.98
10	$6.76	$13.73	$20.50		$10.06	$1.05	$7.03
11	$7.32	$14.87	$22.20		$10.62	$1.14	$8.17
12	$7.93	$16.11	$24.04		$11.23	$1.23	$9.41
13	$8.59	$17.44	$26.03		$11.89	$1.34	$10.74
14	$9.30	$18.89	$28.19		$12.60	$1.45	$12.19
15	**$10.08**	**$20.46**	**$30.54**	***High* Brkeven**	**$13.38**	**$1.57**	**$13.76**
16	$10.91	$22.16	$33.07		$14.21	$1.70	$15.46
17	$11.82	$24.00	$35.81		$15.12	$1.84	$17.30
18	$12.80	$25.99	$38.79		$16.10	$1.99	$19.29
19	$13.86	$28.14	$42.01		$17.16	$2.16	$21.44
20	$15.01	$30.48	$45.49		$18.31	$2.34	$23.78
21	$16.26	$33.01	$49.27		$19.56	$2.53	$26.31
22	$17.61	$35.75	$53.36		$20.91	$2.74	$29.05
23	$19.07	$38.72	$57.79		$22.37	$2.97	$32.02
24	$20.65	$41.93	$62.58		$23.95	$3.21	$35.23
25	$22.37	$45.41	$67.78		$25.67	$3.48	$38.71
26	$24.22	$49.18	$73.40		$27.52	$3.77	$42.48
27	$26.23	$53.26	$79.50		$29.53	$4.08	$46.56
28	$28.41	$57.68	$86.09		$31.71	$4.42	$50.98
29	$30.77	$62.47	$93.24		$34.07	$4.79	$55.77
30	$33.32	$67.66	$100.98		$36.62	$5.19	$60.96
	NPV:	**$148.70**	**$601.05**			**ROI:**	**304%**

1 This research was originally supported by the California Building Industry Association. (CBIA). The author acknowledges helpful comments from the following: Tim Coyle and Richard Lyon of CBIA; and Joe Rodota of Forward Observer. Mandy Zimmerman of Forward Observer provided research assistance.

2 The sprawl debate is far too extensive to recount here. A useful contrarian summary is Bruegmann, Robert, Sprawl: A Compact History, University of Chicago Press, 2005. Note that while there is some scientific evidence for most of the side effects of sprawl listed in this paragraph, many of these studies' findings are disputed and subject to refinement in future research. For perspective on the importance of findings about the effects of sprawl, see Levine, below.

3 Kotkin, Joel, "The War Against Suburbia", *Wall Street Journal*, Jan. 14, 2006; and "The Ersatz Urban Renaissance", *Wall Street Journal*, May 15, 2006..

4 An excellent summary of the effects of exclusionary zoning, and how the existence of such rules implies that the "market vs. planning" paradigm is flawed, is Levine, Jonathan, Zoned Out, Resources for the Future Press, 2006.

5 So-named in deference to advocates of "smart growth."

6 The language in the foregoing sentence implies indifference about whether incentives are supply-oriented or demand-oriented. But in fact unless they affect demand behavior, any supply-side incentives' effect will be only temporary. If developers are encouraged to build condominium buildings that buyers won't buy, the developer will lose money, nothwithstanding any incentive. Thereafter they will eschew "smart growth" development unless they are confident that buyers will support it.

7 The definition of "blight" is relatively flexible, and over time has occasionally—critics would say "frequently"--been abused. The California legislature has attempted to tighten the RDA system up in this and other ways. In addition, the U.S. Supreme Court's 2005 *Kelo*

vs. New London decision, which affirmed the ability of a city to declare a region "blighted" and exercise eminent domain to displace residents in favor of *private* development, has sparked considerable interest in tightening up the conditions under which "blight" can be declared. Certainly a smart districts program should have more rigorous eligibility standards to limit the opportunities for abuse, by either local governments or the developers who often exert influence.

8 In California, the fraction of revenues that must be "passed through" to higher jurisdictions was mandated by AB 1290 of 1993. While the "pass through" computation is complex, the average rate is 33% of RDA-generated property tax revenues. See Dardia, Michael, Subsidizing Redevelopment in California, January 1998, Public Policy Institute of California, for a summary of fiscal issues associated with RDAs.

9 This result is described in Appendix A and discussed below.

10 Kotkin has been outspoken in arguing that many "new urbanist" environments attract more empty-nest retirees (who buy an urban *pied-a-tierre* as a second home) and twentysomething slackers than true job creators.

11 The City of Industry, a "city" that could not exist without RDAs, at this writing is facing opposition to its attempt to extend the life of its RDAs in order to offer tax incentives to lure a sports stadium within its boundaries.

12 Fiscal impacts are outside the scope of this chapter, beyond a rough calculation (reported in the Appendix) estimating the length of time necessary for districts' economic growth to compensate their parent jurisdictions for implicit subsidies.

13 The random sample attempted to span the range of urban environments in which SMART districts might be contemplated: dense city (Los Angeles or San Francisco), inner suburbs (e.g., Marin, Orange, or San Mateo counties, or north San Diego county), fast-growing edge cities (Placer, Riverside, San Bernadino, and Yolo counties), and fast-growing diminishing agricultural areas (Fresno and Stanislaus counties). Our sample included 25 districts, although only 22 could be used because three districts merged or were dissolved in the years between 1996 and 2002.

14 We recorded the assessed value of all real estate (as a proxy for economic activity) within each RDA's boundary at equivalent points in two economic cycles: 1996-97 and 2002-03. Each year was roughly two years after an economic trough. Statewide, on average, each dollar of assessed property value was the foundation of 42 cents per year of economic activity in 2002. (Author's calculations based on annual reports of the state controller.) Economic growth for the surrounding area was estimated based on county personal income data from the Department of Finance's California Statistical Abstract, 2005-06. Personal income was used as an economic measure because gross state product data is only available at the county level with very long lags. The economic growth in the sample RDAs and surrounding counties is displayed in the Appendix. .

15 See Dardia, footnoted earlier in this chapter.

16 "Succeed" is defined as generating enough new revenue to parent jurisdictions (a district's city, county, and the state) to compensate for the loss of revenues that are instead retained by the district.

17 California State Controller, *Community Redevelopment Agencies Annual Report, 1996-97*.

18 Department of Finance, *California Statistical Abstract, 2005*.

19 The tax revenues in question would almost certainly included property taxes, but could include other taxes generated by economic activity, such as income or property taxes, if smart districts were so designed.

20 A thirty-year horizon was used because the revenues retained by the smart district—i.e., "subsidized" by its parent jurisdiction—will generally be spent of fixed investment (e.g., infrastructure), which has a long lifespan.

5

PASSING A GUN CONTROL LAW IN CALIFORNIA: A CASE STUDY OF THE CRIME GUN IDENTIFICATION ACT

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In early February 2007, newly-elected California State Assemblyman Mike Feuer was approached by gun violence prevention activists Amanda and Nick Wilcox. They asked if he would sponsor a bill which would require that semi-automatic handguns sold in California include a newly-tested “microstamping” technology, which could be used to trace shells to the guns that fired them. There was no such requirement anywhere in the country.

The Wilcoxes had worked on a failed attempt at the same law the previous session. But Feuer, even though he had a strong reputation on gun control during his six years as a Los Angeles City Councilman, was reticent. First impressions are important for a freshman legislator. He had an ambitious agenda in a wide range of policy areas.

Feuer didn’t want to get pigeonholed as a single-issue assemblyman. It was the kind of bill that would require many hours of his time to pass, distracting from the rest of his agenda. And, perhaps most important, he didn’t want to fight a highly visible, losing battle first time out.

AN INITIAL ALTERNATIVE SPONSOR

The Wilcoxes had not originally planned on asking a freshman legislator to carry the bill. Their first hope had been Senator Darrell Steinberg. At the time, Steinberg was a freshman senator. But he had completed three accomplished terms in the Assembly and was preparing for a potential leadership role in the Senate. Steinberg had worked closely with the Wilcoxes on a range of issues helped with the successful passage of Proposition 63, a mental health initiative.

Initially, there was an assurance to the Wilcoxes that Steinberg was “99 percent sure” he would carry the bill. However, they got a call from the Senator’s chief of staff that he would not, just weeks before the deadline for submitting new legislation. The Wilcoxes turned to Kay Holmen, the Los Angeles-based president of the California Chapters of the Brady Campaign against Gun Violence. She, in turn, approached Feuer, and pitched microstamping and the Wilcoxes.

THE KILLING OF LAURA WILCOX

Nick and Amanda Wilcox were not the kind to be easily deterred. Their 19-year-old daughter, Laura, valedictorian of her high school, had been shot and killed six years before. The shooting was a random incident, occurring as she worked as a fill-in during winter break at the Nevada County Mental Health Center. She was then a sophomore at Haverford College in Pennsylvania and had been an intern at the mental health center the previous summer.

On the afternoon of January 10, 2001, Scott Alan Thorpe, 41, delusional, with a history of resistance to his family’s pleas to get mental health treatment, walked in to the Nevada Mental Health Center. There he shot and killed Laura Wilcox, who was working as a receptionist, Pearlie Mae Feldman, 68, a mental health caregiver, and severely injured Judith Edzards, 49. Thorpe then went to a local restaurant and shot two more people, killing one, Mike Markle, 24, the manager. After Thorpe was arrested, he explained to the police how the mental health center had angered him and how the restaurant had been trying to poison him. He believed he had settled the matter and asked the police when he could go home.

BECOMING ACTIVISTS

“The issues of mental health and gun violence came to us, we didn’t go to them,” the Wilcoxes say. After Laura’s death, Nick and Amanda, raised as Quakers and long-time contributors to the Brady Campaign, devoted themselves to improved mental health treatment and gun violence prevention. Just a month after the shooting, they organized a vigil at an annual gun show at the Nevada County Fairgrounds, which Thorpe had been known to attend.

A year later, the Wilcoxes pushed the California Department of Justice to send undercover agents to the gun show. The agents found banned weapons for sale, unlicensed dealers, and weapons sold without background checks or ten-day waiting periods as required by California law. Arrests were made, and the Wilcoxes were eventually successful in closing down the show.

THE CAMPAIGN FOR “LAURA’S LAW”

Over the next two years, the Wilcoxes were also instrumental and persistent in moving “Laura’s Law” through the California legislature and having it signed by Governor Gray Davis. The law allows involuntary outpatient treatment of mental illness patients if they are a threat to themselves or others. Laura’s Law was modeled after a similar New York state “Kendra’s Law.” Kendra was a young woman who was pushed in front of a subway train by a mentally-ill man.

Laura’s Law proved difficult to implement without funding. In response, the Wilcoxes worked for the passage of Proposition 63, a state surtax on those with income above $1 million to support treatment for the

mentally ill, passed by voters in 2004. Proposition 63 was sponsored by Darrell Steinberg when he was in the Assembly.

"We're effective because of what happened and because we're not paid," Nick Wilcox once told a reporter. "We've discovered that every legislative door was unlocked." Through their involvement with the inter-related California Chapters of the Brady Campaign (formerly the Million Mom March Chapters), they had learned of microstamping technology. The Wilcoxes saw it as a tool for finding armed criminals at large. It would also be a deterrent against "straw purchasers" who buy and resell quantities of guns, often under the radar and often at gun shows. The microstamp could help identify the original purchaser of a gun through spent shells left at a crime scene, a deterrent to illegal reselling.

The Wilcoxes had worked with Assemblyman Paul Koretz (D-Los Angeles), Feuer's predecessor who had been termed out, on the microstamping bill a year earlier. They had served as volunteer lobbyists on its behalf in the corridors of the state capitol, where they had become well known and respected by legislators and staff alike. One such staffer was Rebecca Marcus, who had previously worked for Johan Klehs, an East Bay legislator known for his knowledge of tax policy, who carried a firearm bill in 2006. Klehs had just termed out and Marcus had just signed on to be chief-of-staff to Mike Feuer, where she was attracted by the freshman legislator's broad and ambitious agenda.

THE DECISION FOR FEUER

Confronted with the plea and story of Nick and Amanda Wilcox, for Feuer the decision to sponsor came down to whether it was winnable. In the previous session, the votes on microstamping were close. "Mike's not a bullshitter," Nick Wilcox said. "He got right to counting the votes."

Following the election, there were a lot of new moderate and conservative Democrats, along with a more conservative Republican leadership. Together, Feuer, Marcus, and the Wilcoxes focused and speculated on the new Senate. They shared their knowledge of the members and opinions on how they would lean. They agreed on the names of five key swing senators. That was enough for Feuer. He would sponsor the bill, but he had conditions.

When Mike Feuer was defeated for City Attorney after being termed out as a city council member, the National Rifle Association (NRA) put his picture on the front page of its national website, with the headline, "We Beat Mike Feuer." As a city councilman, Feuer had developed a national reputation for writing anti-gun laws. These laws included bans on high-capacity magazines and easily concealable weapons, a requirement for background checks on gun store owners, limits of purchases by a single customer to one gun per month to prevent straw purchasers from buying and reselling large quantities of guns, and a law requiring trigger locks on handguns.

Feuer had worked to convince neighboring counties to enact the same laws and penalties as Los Angeles and convened a statewide summit in conjunction with Women Against Violence on women and gun violence. He had developed a range of tactics and strategies against the gun lobby. Finally, he knew that the gun lobby had a range of tactics and strategies to employ against his initiatives.

Feuer told the Wilcoxes that he would author the bill if it were framed as a law enforcement bill, not as a gun control bill. In addition, he insisted that the Wilcoxes and their allies would have to do the heavy lifting. The previous bill had carried the title: "Semiautomatic Weapons—Unsafe Handgun

Requirements Microstamping," which limited its appeal to gun control advocates. In terms of heavy lifting, the previous sponsor, Paul Koretz, had served three terms in the Assembly. He was able to achieve more politically with less effort than a freshman such as Feuer, who would need more help. The Wilcoxes agreed and promised they would organize support from law enforcement as they had with the Koretz bill. They were also delighted when Feuer assigned Rebecca Marcus, whom they remembered from Johan Kleh's office, to work with them.

On February 23, 2007, the last day possible to introduce new legislation, AB 1471, the "Crime Gun Identification Act" was filed by Feuer. The Wilcoxes prepared a strategy to obtain endorsements from the membership of the California Police Chiefs Association (Cal Chiefs). A lawyer by training, Feuer set out to build his case and understand the technology.

MICROSTAMPING TECHNOLOGY

Microstamping is largely the invention of a Manchester, New Hampshire engineer named Todd Lizotte. Lizotte describes himself as a conservative Republican gun owner, member of the NRA, and an advocate for Second Amendment rights. He listed Sarah Palin on his Facebook page as a person he admires.

In 1993, he and a number of colleagues at ID Dynamics in Londonderry N.H. were working on ways of imprinting microscopic serial numbers on metal parts. Such numbering is used in the automobile, aerospace, and medical industries to help track stolen parts and assist in the investigation of crash sites. As a gun enthusiast, Lizotte saw a connection.

Lizzotte understood that when a cartridge case, or shell, is forged into the bullet chamber in the act of firing a gun, the intense pressure caused by the firing leaves any marks present in the chamber etched onto the shell. Matching these random marks in shells to models of guns and specific guns, a process called ballistic fingerprinting, has long been a tool in forensic investigations. Lizotte realized than the microstamping technology he was developing for metal parts could be applied to great effect in ballistic fingerprinting.

The method he and his colleagues developed was to engrave a code with laser technology onto the face of the firing pin. When a trigger is pulled, the firing pin snaps into the back of the bullet casing, hitting a small circular "primer." The blow ignites an explosion of gunpowder, launches the lead tip out of the barrel of the gun, and forces the shell back against the firing pin at the primer. That force, Lizotte found, can effectively forge symbols from the firing pin onto the primer. Using microscopic code, a spent shell could be used to identify the make, style and serial number of the gun.

GUN LAWS IN CALIFORNIA

California, according to the Brady campaign, leads the nation in gun control regulation. In 2007, the state scored a 79 out of a possible 100 on the Brady national report card. Over the years, the state has banned assault weapons, .50 caliber rifles, and "unsafe" guns that have no load indicators in the chambers or flunk a drop test. It has required guns to be purchased from licensed dealers and the maintenance of records of handgun purchases. California required users to obtain a safety certificate with a written test and a safe-handling demonstration. It mandated safety and locking devices, limited handgun purchases to one per month per person; and imposed a ten-day waiting period, and required a universal background check.

For both gun control and gun rights advocates, California is seen as a bellwether state. Active and resourceful lobbies locate in Sacramento and myriad local chapters of volunteer organizations monitor local developments. The NRA, for instance, does not disagree with the Brady assessment. But it argues that the Brady report card demonstrates that jurisdictions with the most restrictive gun laws (California, New York, District of Columbia) have the highest homicide rates.

Many of the state laws concerning guns in California were first enacted in at the city and county level. Since the mid-1990s, California local governments have passed more than 300 gun-related ordinances. Lower courts in California have consistently upheld the authority of local governments to regulate firearms, somewhat mitigating the tension inherent to what owning a gun means in rural settings with strong hunting cultures, versus urban settings with higher crime rates and strong gang cultures.

Gun control laws are, generally, weakest at the federal level, where, for instance, a Clinton era ban on assault weapons was allowed to lapse by the subsequent Bush administration. They are strongest at the local level. For example, in 2005, San Francisco voters adopted proposition H, an ordinance to prohibit the possession, manufacture, sale, distribution, and transfer of handguns in the city.

Local communities in California have prohibited gun dealers from operating in residential areas or near schools and required dealers to obtain liability insurance. They have required dealers to have background checks (a Feuer initiative while on the LA City Council) and prohibited the sale or possession on firearms on public property (the Wilcox gun show initiative). Finally, they have required gun owners to notify police of lost or stolen firearms. As a result, the stakes are high at the state level on gun legislation. The California State Assembly has tended to be more restrictive than the Senate and, of course, the governor has final veto power.

THE POSITION OF THE GOVERNOR

One of the major unknowns for Feuer and his allies was where Governor Arnold Schwarzenegger would come down on the bill—if it reached him. While they had good relations with the governor's public safety staff, the staff was not able to make any commitments on behalf of the governor. He would make the decision if and when the bill came to his desk.

When Arnold Schwarzenegger first ran for Governor, he was a candidate who, in his acting role as *The Terminator*, had walked into a gun store, picked out a 12-gauge auto loader, a .45 long slide, a phase plasma rifle, and an Uzi 9 mm machine gun, and, leaving, shot the guy behind the counter. As governor, however, he proved to be more moderate while still considering himself a proponent of the right to bear arms.

Schwarzenegger had previously signed bills to prohibit the sale of .50 caliber sniper rifles, to prohibit the sale of ammunition to minors, and to require owners of guns seized at domestic violence incidents to undergo background checks. He had also signed bills to require the state to keep records of guns reported stolen from dealers and to allow a defendant to be charged separately for each assault weapon or .50 caliber rifle he or she possesses (a Koretz bill). At the same time, however, the governor had vetoed a bill that would have required dealers to store ammunition where it would be inaccessible to the public. He vetoed another that would have required gun violence prevention education in schools.

Another factor affecting the fate of the microstamping bill was that it was competing with two other high-profile gun bills. AB 362 by Assemblymember Kevin DeLeon (D-Los Angeles) would require background checks for purchasers of ammunition. AB 334, by Assemblymember Lloyd Levine called for mandatory

reporting of lost or stolen guns. For Feuer and his allies, while they supported AB 362, they were aware that having two major pieces of gun technology legislation passed and signed by the governor in one year would be a difficult hurdle.

SPECIFICS OF THE BILL

The text of Feuer's AB 1471 read—in part—as follows:

> *Existing law defines unsafe handguns as failing to pass certain tests, or lacking certain features, as specified. This bill would, commencing January 1, 2010, expand the definition of unsafe handgun to include semiautomatic pistols that are not designed and equipped with a microscopic array of characters that identify the make, model, and serial number of the pistol, etched into the interior surface or internal working parts of the pistol, and that are transferred by imprinting on each cartridge case when the firearm is fired. By expanding the definition of "unsafe handgun," the manufacture, sale, and other specified transfer of which is a crime, this bill would expand the scope of an existing crime, and thereby impose a state-mandated local program.*

AB 1471 was identical to the Koretz bill when it was first filed. In April, however, it was amended to require microstamping to appear in "two or more places" on the interior parts of the gun, not just one.

The Feuer bill contained a number of provisions and assurances that had been worked out by Koretz with multiple stakeholders during the session before. A key element was that it applied only to semi-automatic pistols. A semi-automatic pistol is defined as one that fires one cartridge and reloads the next for each pull of the trigger. Bullets are stored in a magazine in the handle of the gun. The recoil of a single shot ejects the fired cartridge from the pistol's chamber and loads an unfired round from a magazine into the chamber for the next shot.

Many semi-automatic pistols are also double action, meaning that the first pull of the trigger requires greater effort than subsequent pulls in the same firing. A semiautomatic is more deadly and more accurate than a revolver. Unlike a revolver, it leaves shell casings behind. Most important, it is not a gun commonly used in hunting, home protection, or sport target firing. Rather, it is the weapon most commonly used in gang shootings and by police.

Another interesting phrase in the bill was later added in the Senate: "...the Attorney General certifies that this new method is also unencumbered by any patent restrictions." In the 1980s, Sacramento was scandalized by an investigation known as "Shrimpgate," in which undercover FBI agents bought the support of legislators for a bill that would benefit a single, fictitious seafood company. This sting operation, which led to the conviction of five legislators and four legislative aides made legislators wary of any legislation that could benefit a single patent holder. Todd Lizotte solely held the patent on microstamping technology. In addition, the phrase "unencumbered by any patent," had no real legislative or legal precedent, and therefore no specific legal meaning.

OBTAINING SUPPORT

Amanda and Nick Wilcox had left Mike Feuer's office with the charge to do the heavy lifting and to stick to the script of the bill being seen as law enforcement legislation. The previous year, California Brady Campaign chapters had developed a support list for the Koretz bill that included 45 police chiefs.

That list had to be rebuilt. Each endorsement took multiple contacts—a letter, several phone calls, and email and reminders. Local Brady chapters contacted their local chiefs. In addition, the Wilcoxes and their allies tried to get to chiefs in areas where there were no chapters, particularly in the districts of key swing senators. Along the way, however, it became apparent that the NRA had persuaded a number of chiefs who supported the Koretz bill to withhold support from the Feuer bill.

Meanwhile, Mike Feuer turned to his Los Angeles allies from his City Council days, where he had worked closely with Los Angeles County Sheriff Lee Baca, who had also supported the Koretz bill. At Feuer's request, Baca's staff members went through the recent homicide files. They looked for cases where, if shells left as a murder scene had been microstamped, it would have made a significant difference in solving the crimes. And they found many such cases.

"On July 28, 2005, a 14 year-old boy and his 18 year-old brother were shot and killed in a mini-mart near their home. Police found four shells at the scene. No leads," Feuer would testify. Later "a man coming home from work was flagged down by a woman apparently in distress. When he went to help her, two men tried to rob him. When he ran, they shot and killed him. Three shell casings. No leads."

Such stories allowed Feuer to put human faces on the story. "These are not isolated incidents," he would add. "In 45 percent of the homicides in California, no arrests are ever made, and the perpetrators, often members of violent gangs, are left to roam the streets, putting all of us at risk."

As Feuer delved deeper into the technology he also became more careful not to promote microstamping as a perfect solution to the problem of gun violence. "This is not a panacea," he would say, "but it will solve some gun crimes and prevent some people from being killed." He also worked more closely with the inventor, Todd Lizotte, and Joshua Horowitz, the executive director of the Washington DC-based Coalition Against Gun Violence. The Coalition, which included the Brady Campaign, co-sponsored the bill along with the Brady campaign.

COMMITTEE WORK

The first hearing for the bill was before the Assembly Public Safety Committee. Feuer's office and the Wilcoxes on behalf of the Brady Chapters submitted information sheets and letters of support. The analysis prepared for the hearing was drawn from the Wilcox material as well as a letter they had drafted submitted by Fresno Police Chief Jerry Dyer. Todd Lizotte was flown out from New Hampshire to testify and he was joined by Joshua Horowitz.

From Feuer's perspective the hearing went well in terms of giving some momentum to the bill. The gun lobby was principally represented by Kathryn Lynch, a Sacramento lobbyist. Lynch's testimony centered largely on the technology as flawed and unproven as a law enforcement tool. But that appraisal seemed to be contradicted by the support of a significant number of police chiefs and sheriffs who had signed letters and on behalf of AB 1471.

"Mike Feuer was excellent in the Assembly Public Safety Committee," Amanda Wilcox said. "He was passionate, articulate, prepared, and methodically built his case. The whole room listened." The legislative hearings, Feuer pointed out, were important in terms of events to mobilize support and to engage in direct dialogue. "All of the hearings went pretty much as expected," Feuer said. "People said the things one would expect them to say." The real political action would be later, outside of Sacramento, in the districts of the swing senators and in the media across the state and beyond.

EXTERNAL WORK

While the Feuer bill was under consideration, the Brady campaign was reorganizing its California operation. Its one paid staff person was leaving. Brian Malte, the Washington DC-based director of state legislation for the Brady Campaign, stepped in to play a larger role in developing strategy for passage of the bill.

Instead of immediately hiring a replacement, Malte advocated using the salary savings to hire a professional contract lobbying firm that would work on the microstamping bill. Malte and the Wilcoxes interviewed four such firms. They chose Political Solutions, a Sacramento organization noted for its political ties to Republican as well as Democratic leaders.

Political Solutions offered its services at a reduced rate. Staffers Tami Miller, whose portfolio largely consisted of real estate and land-use clients, and James Jacks, who had worked for former Governor Pete Wilson and then Secretary of State Bruce McPherson, became the principal lobbyists. “Political Solutions was my top choice,” said Amanda Wilcox. “They were prepared, smart, easy to talk to, and I felt a very good connection. I knew that we needed someone who would appreciate and value the work of the chapters. Tami, in particular, became emotionally invested in the bill. She told me that whenever she heard or thought of Laura’s story, she was deeply impacted.”

At the time, the Wilcoxes believed they were hiring a firm to concentrate on one Senate vote, Michael Machado, a centrist Democrat in a politically-diverse district. (Another Political Solutions staff member had previously worked in Machado’s office.) In addition, the firm would focus on Governor Arnold Schwarzenegger.

Soon, however, Feuer, Rebecca Marcus, the Wilcoxes, Political Solutions, and Brian Malte began to develop a larger, national strategy. They knew the governor “liked big, high visibility initiatives” and, unlike most of the players in Sacramento, he viewed himself performing on a national stage. Additionally, for the national Brady campaign, California was to be just the first state in the country to require microstamping; there were 49 more.

THE GUN LOBBY FIGHTS BACK

Heading into May 2007, the microstamping bill was beginning to gain momentum. At the Assembly Appropriations Committee, James Jacks appeared in support of the bill, surprising members of the gun lobby that the other side had a lobbyist, and one with good ties to Republicans. Feuer had also taken the unusual step of arranging meetings with the boards of the two major state law enforcement organizations, the California Police Chiefs Association and the Police Officers Research Association (PORAC).

For the NRA and its allies, it began to appear that this battle would be a tougher fight than was the Koretz bill. The gun lobby had prevailed in the previous session by arguing against microstamping on the grounds that the technology was unproven in the field. It would be prohibitively expensive for manufacturers. It would raise costs for law enforcement because they microstamped guns would be much more expensive. Most crimes, they argued, are committed with stolen guns and the shells would simply trace back to the original owners, leading to their false arrests.

THE UC-DAVIS STUDY

One of the most persuasive arguments for the gun lobby was that the microstamps could be easily removed or altered. These were the arguments that had prevailed the previous year. They had a working formula, and soon, an unforeseen ally in their argument.

On May 3, 2007, a team of researchers at University of California-Davis Forensic Science Graduate Program released a report critical of microstamping based on testing the technology with a range of firearms. The study, which a University press release said was commissioned by the California legislature, was conducted by a graduate student Michael Beddow under the supervision of Professor Fred Tulleners. Tulleners was director of the forensic science graduate program at UC-Davis and former director of the California Department of Justice crime labs in Sacramento and Santa Rosa.

Beddow's study sought to evaluate the "durability and longevity of an array of micro characters laser-machined onto firing pins, the legibility of the imprint of the micro-characters on ammunition, and the ease with which micro characters can be intentionally defaced or obliterated." After tests, the study concluded that microstamping was "flawed" and that "at the current time it is not recommended that a mandate for implementation of this technology in all semiautomatic weapons in the state of California be made. Further testing, analysis and evaluation is (sic) required." The new study seemed to confirm the charges that the technology was unreliable and that the microstamps could be erased or altered.
The California Chapter of the NRA, gun trade and business associations, and sporting organizations quickly disseminated the UC Davis findings to the media and law enforcement organizations.
While the proponents of the bill worked largely through the media and the law enforcement community, the NRA and other opponents of the bill used their previous case against the bill, fueled by the UC-Davis study, to win support. They operated through myriad blogs, online discussion boards, and conservative talk radio. The opposition points were reiterated with passion and even vehemence. Petitions and letter-writing campaigns were organized by gun manufacturers and retailers. Soon, the UC-Davis study became the lead story.

COMBATING THE UC-DAVIS REPORT

Feuer immediately enlisted Todd Lizotte and sought to refute the charges, not to the UC-Davis faculty who conducted the study, but to the Chancellor of the University, Larry N. Vanderhoef. Lizotte, while maintaining his Second Amendment support and membership in the NRA, had become an articulate and scientifically-based defender of his technology for this use. From legislative testimony to pro-gun discussion boards on internet blogs, he continually and calmly refuted the opponents of the technology.

Lizotte was especially knowledgeable about the laser-based imprints and their reliability, which was at the core of the UC-Davis study. "I am not going into detail on what the encoded geometric is," Lizotte wrote on a blog site, *Gun Debate Critic*. "However I will state that if someone attempted to file off the code and left only five percent of the original encoded surface, that five percent will still retain 100 percent of the actual code."

"Todd Lizotte was selfless and generous throughout this whole process," Feuer said. Indeed, when Lizotte was informed of the sole-source concern, he said he would gladly give up his patent rights, offering it for free to manufacturers who used the technology.

"Nick and I met first met Todd when he came to the Public Safety Committee hearing (earlier in the year)," Amanda Wilcox said. "He told us he strongly believes that inventions that have important public benefit should be in the public domain. He mentioned Jonas Salk, who never got a patent for the polio vaccine."

THE VANDERHOEF LETTER

The UC-Davis study had proved to be a major problem for advocates of the Feuer bill. They had been counting on an endorsement from the California Police Chief's Association at its May 24th meeting, but the UC-Davis study derailed it. Feuer, however, prevailed upon the UC-Davis administration. Two weeks after the study was released, Chancellor Vanderhoef, in a highly unusual step, publicly released a letter to Mike Feuer tending to undermine the findings and formally apologized for the study.

Dear Assemblyman Feuer:

I am writing to provide corrections and clarification about a recent press release, one that references an issue of significant legislative interest, issued by the University of California, Davis.

The release, dated May 3, 2007, relates to a UC Davis research project authored by two UC Davis faculty members and a UC Davis graduate student regarding "microstamping" of some handgun and rifles. This study is entitled, "What Laser Machining Technology Adds to Firearm Forensics: How Viable are Micro-Marked Firing Pins as Evidence?" I understand that you have authored legislation this session on this issue. Unfortunately, the release surely will have created some misimpressions. With this background, I would like to set the record straight:

First, this is an "Author's Report" and was posted by California Policy Research Center (CPRC), which funded the study, before CPRC's usual academic peer review and state legislative briefings, which violates CPRC's own policy. As well, public release of the report and issuance of a press release by UC Davis was premature.

Second, contrary to the press release, the Legislature did not commission the study. The study was faculty-initiated with the CPRC.

Finally, I understand that you have concerns about the relevance of the specific contents of this study to your pending legislation, especially with respect to (1) the age and kinds of guns used in the study as compared to those that are covered in your legislation, (2) the technology tested in the study as compared to the technology called for in the legislation, and (3) differences in the amount of microstamping examined in the study compared to the amount of microstamping required in your legislation. While the accuracy of the findings can and must be assessed by the upcoming peer review, the press release should have not connected the study results with the legislation.

I regret the issuance of this press release, premature posting of the report, the implication that the study pertains to your legislation, and the inaccurate statement about the legislative origins of the report. Please accept my apologies for complicating, rather than elucidating, a sensitive public policy issue on which you have taken statewide leadership.

Sincerely,

Larry N. Vanderhoef
Chancellor

REGAINING MOMENTUM

The Vanderhoef letter turned back the tide of opposition to the Feuer bill. The Wilcoxes were able to use the letter to persuade Cal Chiefs to agree to consider their endorsement at a later date. And because the letter was so unusual—a chancellor casting doubt on the research of his own faculty—it was a convincing piece of evidence for legislators, the media, and even the national audience following the bill.

A further boost came when Congressman Xavier Becerra (D-Los Angeles) and U.S. Senator Edward M. Kennedy (D-MA), who was also the California First Lady's close uncle, announced that they planned to file federal microstamping legislation in Congress the following year. The California Brady chapters also organized a Lobby Day on May 23, 2007, where Police Chief Ken James, Chair of the Cal Chiefs Firearms sub-committee, spoke with several legislators. The event was a success, and also had the important effect of proving to the Political Solutions staff that the volunteers they with which they were working were effective and professional.

AB 1471 was brought to a vote on the Assembly floor on May 30, where Feuer and his allies had been confident they had the votes. The bill passed 44-29, along party lines. "Tami and James had done their job of counting the votes correctly and Mike Feuer did a great job at rebutting the opposition on the floor," Amanda Wilcox said.

THE SUMMER OF THE STRATEGY TEAM

All along, Feuer and the Wilcoxes knew that the major challenge for the bill was not in the Assembly, but in the Senate and with the Governor. "The thing that surprised me most when I got to Sacramento was the animosity between the Assembly and the Senate," Feuer said. "I quickly learned that nothing is guaranteed."

In the Senate, they had identified five key potential swing votes: Michael Machado (D-Linden), Dean Florez (D-Shafter), Ron Calderon (D-Montebello), Gloria Negrete McLeod (D-Montclair), and Denise Moreno Ducheny (D-San Diego). "We knew that Ducheny was against us, Amanda Wilcox said. "Tami and James connected with Calderon, who was an 'aye' and Negrete McLeod, who was a 'no.' We needed one more vote. We were a little concerned about Senator Joseph Simitian (D-Palo Alto) and arranged patch-through calls to him, and we arranged more calls to Machado and Florez."

At this point, Brian Malte, Kay Holmen, the Wilcoxes, Tami Miller, James Jacks, Rebecca Marcus, and Joshua Horowitz began having weekly conference calls. Other staff from the Brady Campaign and Coalition Against Gun Violence listened in. As the summer progressed, representatives from the offices of Senator Kennedy and Representative Becerra also joined the calls. Malte emerged as the point person in the discussions, constantly pushing the group on obtaining more favorable media coverage, placing op-eds, and meeting with newspaper editorial boards. The group also picked a target date for the Senate vote around which to coordinate. It planned a demonstration of the technology in Los Angeles for late August.

Small and medium successes continued to occur throughout the summer. To Feuer's surprise, the board of the Police Officers Research Association (PORAC), which had subjected him to mostly skeptical questions, voted to endorse the bill. *The Bakersfield Californian*, with a large conservative readership, ran an editorial in support. So, too, did *The Los Angeles Times*. A supportive op-ed submitted by the Fresno Police Chief was circulated widely.

SENATE WORK

The Wilcoxes and the Political Solutions staff continued to work on the Senate and cleared three hurdles with committee staff and Senate President Pro Tem, Don Perata. These hurdles involved 1) providing assurance that the bill would not contribute to prison overcrowding (a required provision of crime-related legislation), 2) adding language to defuse the sole-source concerns, and 3) convincing the senate president's staff that AB 1471 was the Brady Campaign's very top priority piece of gun legislation. In addition, they were also successful, along with Feuer, in persuading Perata to co-sponsor the bill.

Meanwhile, the Wilcoxes concentrated on Senator Machado in particular. They spent time with one of Machado's close friends in the Senate, Tom Torkalson (D-Antioch) and his staff, connecting back to the Brady Campaign's strong chapter in Contra Costa, in Torlakson's district. One Friday, they drove through Machado's district and visited all of its police stations unannounced, speaking to a number of captains and dropping off literature. In time, they would have the endorsements of the Stockton, West Sacramento, Davis, Woodland, and Suisun City chiefs.

DEMONSTRATING THE TECHNOLOGY

Feuer had also developed an ally in Los Angeles Police Chief William Bratton, a powerful figure with a national constituency and a friend of the Governor. In August, through Bratton, Feuer arranged for the media demonstration of the microstamping technology with Todd Lizotte to be held at the Los Angeles Police department shooting range. Los Angeles Mayor Antonio Villaraigosa, Sheriff Baca, and LAPD Chief of Detectives Gary Brennan were all present.

Feuer, whose name had now become synonymous with the microstamping bill, recalled his nervousness, no doubt with the UC-Davis study in mind, as he realized he had not yet seen a demonstration of it himself. "I remember driving to the Training Academy thinking, "This thing had better work, or my political career is going to go right down the drain. I'll be a laughing stock."

With the media and the public officials looking on, an LAPD police officer fired bullets from guns outfitted with microstamping technology. Lizotte then examined the shells under a display microscope so everyone could see the identifying markings made by firing the gun. It worked; Feuer exhaled.

"The Los Angeles County Sheriff's Department Homicide Bureau has hundreds of unsolved cases where the only evidence left at the scene of the crime were expended bullet casings," Sheriff Baca said in a press release. "If these casings had imprinted information on them from the firearm, our investigators would have an exceptional chance of solving these heinous crimes." Another compelling speaker at this even was Tim Heyne, president of the Ventura County Brady chapter. Heyne's wife and best friend had been shot, spent shell casings were scattered over his wife's body, and there were no leads on the gunman until he killed another person the next day.

THE SENATE VOTE

The California State Senate has 40 members; it takes 21 votes to pass a bill requiring a simple majority vote. (Budgets and bills with tax increases require 26 votes under a 2/3 rule). Around September 1, 2007, the Wilcoxes learned that Senator Florez would vote with them. He would be the 21st vote. T*he Bakersfield Californian* editorial and the endorsement of Police Chief Dyer seemed to have played a role. They had to keep it a secret, however. If the opposition found

out, there would be full-scale campaign to get the vote back by the NRA. The microstamping team started to work to have the bill put before the Senate as it finished the session with all the aye votes on the floor. At that point, however, Senator Edward Vincent (D-Inglewood) a supporter of the bill, had to leave Sacramento to tend to a family matter.

Over the next days, they put the full press on Sen. Machado, who had voted against the Koretz bill the previous year. Feuer met with Machado and explained the new bill in detail. By this time, they had secured the five police chiefs from his district, run radio ads, and pressed Machado's friend Sen. Torlakson, who would also be the floor manager for the bill in the Senate. They enlisted lobbyists Machado trusted from the Friends Committee on Legislation and the Lutheran Office of Public Policy. When the Lutheran Policy lobbyist left Machado's office, they reported that the NRA was waiting to go in.

On Tuesday, September 4, they received word that Machado would be an "aye." They immediately informed Senator Perata that they were ready. There was confusion on the floor over another bill, however, and the vote was delayed another day.

On Wednesday, September 5, they were ready again, only to learn that another supporter, Senator Ellen Corbett (D-San Leandro), was at a funeral. Another delay. On Thursday, finally, they had all of their votes on the floor. It was at the end of session and Perata was taking bills out of order, a common legislative tactic as Senators came and went from the chamber. Feuer and Rebecca Marcus watched from the gallery. The Wilcoxes and the volunteers were watching the votes on their computers. Across the country in Virginia at a school event for this son, Brian Malte was listening to the floor debate on his Blackberry as the Wilcoxes put their phone next to their computer speakers so he could hear. When Perata returned to the chamber, he turned to Feuer and, in a tone senior Senators reserve for freshman Assemblymembers, said, "You better have the votes, we are doing this right now."

"Tami was in the hall, watching the floor vote on the monitors and the gun lobby was watching on a different monitor down the corridor," Amanda Wilcox said. "When Florez voted 'aye' they (the gun lobbyists) looked shocked. When Machado voted 'aye' they started blaming each other." But when they got to Senator Joseph Simitian he didn't vote. Perata came back at the end and called Simitian's name, and he gave the 21st "aye." AB 1471 had passed the Senate 21-17.

On September 10, the bill went back to the Assembly for a concurrence vote because of language changes made by the Senate. There was considerable debate on the floor, but Feuer held all of the previous 'ayes' from the initial vote. The bill was on its way to the governor.

PUSHING THE GOVERNOR

"When the bill came out of both houses of the legislature, I still had no idea at all whether the governor would sign this thing or not," said Feuer, who, as it turned out, also represented Arnold Schwarzenegger's Brentwood neighborhood. "Everything we did for the Senate vote," said Amanda Wilcox, "was also for the Governor's benefit—the editorials, the LA demonstration, and the long support list. By the time AB 1471 reached the Governor's desk, we had 97 names, including 65 police chiefs and sheriffs, five law enforcement organizations, a DA, three mayors, six cities, the state Superintendent of Instruction, and 15 different advocacy organizations."

Over the summer Feuer, Marcus, Political Solutions, and the Wilcoxes worked very closely with Chris Ryan and Tom Sawyer, the Governor's public safety staff. Ryan and Political Solutions had a previous long and

mutually-respectful relationship. Ryan and Sawyer took meetings with the Wilcoxes, Todd Lizotte, Feuer, and the Emeryville Police Chief Ken James, who chaired the Cal Chiefs firearms committee. ("Wear your uniform, with gun" he was told.) Feuer had also, through the Brady organization, been working with an editorial writer for The New York Times. On September 24, the newspaper ran a lead editorial supporting AB 1471, an extraordinary boost for a piece of state legislation 3,000 miles from Times Square.

> ***An Opportunity for Mr. Schwarzenegger***
>
> *California's Republican governor, Arnold Schwarzenegger, has a laudable record of splitting with his party's orthodoxy to support pathbreaking state initiatives on global warming and stem cell research. Now Mr. Schwarzenegger has a chance to make Californians safer, and set a new national standard, by signing into law the Crime Gun Identification Act of 2007.*
>
> *The measure would make California the first state to require that all new semiautomatic weapons be equipped with technology known as microstamping, which imprints microscopic markings as a gun fires. That would allow police to quickly match bullet casings found at a crime scene to the weapon that shot them, a valuable new tool for solving gun crimes and for deterring gun traffickers who supply violent criminals.*
>
> *The technology is relatively inexpensive. And the new law gives manufacturers until 2010 to retool. Mike Feuer, the Democratic Assemblyman who is the author of the bill, notes that more than 40 percent of homicides in California go unsolved yearly for lack of evidence. The national record is not much better, explaining the bill's broad support from law enforcement. There is no real explanation, save the fierce opposition of the gun lobby, for why no Republican voted for the bill.*
>
> *California's embrace of the innovative crime-fighting tool over reflexive gun lobby opposition would set an example for other states, and also for Congress, which certainly needs more than a push. Nearly six months after the massacre at Virginia Tech, a bill to tighten the system for preventing people with serious mental problems from purchasing guns still languishes.*
>
> *For California, the new law offers a real chance to save lives and bring more perpetrators of violent crime to justice. Mr. Schwarzenegger's choice should be easy.*

In the next weeks, the Governor, or his wife, or his staff heard from New York Mayor Michael Bloomberg, Senator Edward Kennedy, Chief Bratton, and a list of celebrities close to Schwarzenegger from his movie days, in support of the bill. Ambivalent as he was about gun control, Schwarzenegger had respect for Mike Feuer. And he had strong feelings about crime victims, especially young crime victims.

SIGNATURE

In the end, those around the Governor felt he was motivated most by the argument of justice for victims and their families. He was moved by the story of what happened to Laura Wilcox at the Nevada County Mental Health Center and the dedication of her parents on behalf of the bill. On October 14, 2007, Governor Schwarzenegger signed AB 1471, The Crime Gun Identification Act, into law. "While I appreciate and understand that this technology is not without limitations" a statement from the Governor read, "I am signing this bill to provide law enforcement with an additional tool for solving crimes. I encourage all stakeholders to work on improving this technology." With his signature, the bill became law.

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STAGNANT WAGES: CALIFORNIA'S INTERIOR METROPOLITAN AREAS

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From 1979 to 2007, real wages of the inland agricultural areas of California suffered a marked economic deterioration relative to California's large coastal metropolitan areas.[3] This chapter documents that relative decline and investigates possible explanations for wage divergence in California over the same period. It concentrates on twelve small inland Metropolitan Statistical Areas (MSAs) that, at first glance, would not seem to be candidates for economic distress. Eleven of these twelve areas compose one of the most productive swathes of farmland in the United States, if not the world. The San Joaquin Valley, which comprises eight of these metropolitan areas, exports more agricultural products than any U.S. state—other than California. And all 12 of these MSAs have been growing rapidly in population.

Yet compared to the large coastal metropolitan regions of Los Angeles, San Diego, San Francisco and San Jose, real wages in these twelve MSAs are falling behind. Even as their populations have boomed, their wages have stagnated. In some cases, wages actually declined in real terms. At the end of the 1970s, these areas lagged behind the large coastal metros. From 1979 to 1999 the gap between these areas continued to widen. There was some recovery 1999 to 2007, but the gap is nonetheless still huge.

It is not a surprise that wages in small metropolitan areas are less than wages in large ones. All twelve interior MSAs have populations well under one million. Larger places have greater congestion, longer journeys to work, and higher land prices. These factors raise the cost-of-living and exert upward pressure on wages (O'Sullivan 2007). But in the period after 1979, the percentage difference between average wages in the interior and the coast grew sharply.

Figure 1 shows that from 1969 to 1979, real average wages for the twelve interior places in our study were low but moving in line with real average wages in

the four coastal metropolitan areas. Both inland and coastal areas were depressed in that stagnant decade. In the 1980s, however, real wages on the coast and in the interior began to diverge. During the 1990s, the gap widened dramatically. There was a slight shrinking of the gap after 1999, but the discrepancy is still large. The coastal MSAs' average wage of almost $61,000 in 2007 is almost $26,000 higher than the interior MSA's average wage. It is this gap that the chapter addresses.

Most of the analysis that follows makes use of the average annual wage as the key metric, as reported by the U.S. Bureau of Economic Analysis, Regional Economic Accounts, for all MSAs. This measure is the wage per job, including full-time and part-time work, and excluding the self-employed (proprietors and partnerships). The average wage is used because wages are the largest and most explicitly spatial component of personal income, and personal income is in turn a good (albeit imperfect) measure of material well-being. Disparities in income, therefore, are in many ways the result of disparities in wages. Understanding wage divergence helps in understanding why people in some California locations are materially better off than people in others.

The next section discusses possible explanations for the growing wage differences across California. It pays particular attention to the importance of education and industrial mix in determining those differences. The coastal and interior MSAs in California are then shown to be markedly different in their industry mix. They also differ in the nature of their immigration and in the education level of their populations. The final section provides some conclusions relevant to policy.

POSSIBLE SOURCES OF THE WAGE GAP

The twelve metropolitan areas that are the focus of this chapter are shown on Table 1. In 1969, ten of these twelve MSAs had a lower average real wage than any of the four coastal MSAs. The two exceptions, Redding and Stockton, had a slightly higher real wage than San Diego. None were as high as Los Angeles, San Francisco, and San Jose.

During the next three decades, wages in the twelve inland MSAs grew more slowly than in three of the four large coastal MSAs—Los Angeles is the exception. Wages in Hanford-Corcoran and Madera grew about the same or slightly more than the Los Angeles growth: 13.2 percent. The interior growth rates over those 38 years ranged from a high of 15.4 percent (Madera) to a low of -10.0 percent (Redding). In contrast, the growth of the four coastal MSAs ranged from a high of 43.7 percent (San Jose) to a low of 13.2 percent (Los Angeles). Average real wage growth in the 12 interior MSAs combined was only 6 percent, while in the four large coastal MSAs it was 30 percent.

Why might this pattern have developed? The wage data suggest that in the last decades of the twentieth century, these quite different places became less, rather than more, alike. A further puzzle is that falling wages are often associated with outmigration (Drennan 2008), but people are flowing *into,* rather than out of, California's interior MSAs.

Table 1 also shows that the interior MSAs have mostly outstripped the coastal MSAs in population growth. The interior MSAs grew, on average, by 134 percent from 1969-2007, while the four coastal MSAs averaged 57 percent. In part, this divergence is an artifact of the large differences in population between the coastal and interior regions. All four coastal MSAs have well over

Table 1. Average Real Wage & Population by MSA, 1969 and 2007 Source: BEA

MSA	Average Real Wage		Population		Percent Change, 1969-2007	
	1969	2007	1969	2007	Wage	Population
4 Large Coastal MSAs						
Los Angeles	43,849	50,520	8,366,706	12,784,612	13.2%	52.8%
San Diego	36,732	47,611	1,340,989	2,959,734	22.8%	120.7%
San Francisco	44,262	64,287	3,088,491	4,216,125	31.1%	36.5%
San Jose	45,725	81,158	1,051,545	1,786,355	43.7%	69.9%
Simple average of 4	42,642	60,894	3,461,933	5,436,707	30.0%	57.0%
12 Small Interior MSAs						
Bakersfield	36,450	39,264	325,549	787,179	7.2%	141.8%
Chico	33,851	33,227	101,057	218,185	-1.9%	115.9%
El Centro	29,564	33,059	73,604	160,830	10.6%	118.5%
Fresno	33,151	35,653	408,304	894,748	7.0%	119.1%
Hanford-Corcoran	30,530	35,140	65,647	148,232	13.1%	125.8%
Madera	28,593	33,785	41,079	145,654	15.4%	254.6%
Merced	29,926	32,712	101,255	244,218	8.5%	141.2%
Modesto	33,518	37,034	191,271	509,068	9.5%	166.2%
Redding	38,591	35,080	76,290	179,068	-10.0%	134.7%
Stockton	37,167	38,407	284,769	667,886	3.2%	134.5%
Visalia-Porterville	28,790	31,215	185,701	419,172	7.8%	125.7%
Yuba City	34,100	36,507	86,435	163,302	6.6%	88.9%
Simple average of 12	32,853	35,090	161,747	378,129	6.4%	133.8%'

one million residents, while none of the interior places do. The interior areas range in population from 148,000 (Hanford-Corcoran) to 895,000 (Fresno). Nevertheless, the population growth in the interior is striking, given the slow wage growth over the same period.

What can account for not just California's wage divergence, but also for its peculiar form, characterized by sharp increases in population even as wages stagnate or decline? Four factors may have played a role: population, industrial specialization, human capital, and immigration.

POPULATION

Economists have long recognized that large places have advantages over small ones. Gunnar Myrdal, in his cumulative causation growth model (1957) argued that larger places have initial advantages that lead to self-sustaining growth. In core-periphery models, an initial concentration of economic activity at the core is not easily overcome by the periphery (Krugman 1991; Fujita *et al* 2001). Scale economies and agglomeration economies also favor larger places, pushing up labor productivity and thus wages (Henderson, 1988).

Famed 18th century economist Adam Smith noted that market size, which is highly correlated with population, permitted industrial specialization. "There are some sorts of industry…" he wrote, "which can be carried on nowhere but in a great town." (Smith 1776, p. 17). Size allows specialization because large places have bigger consumer and labor markets, and because large populations allow for ease in the coordination of talent (Becker and Murphy 1992). Specialization, in turn, better enables learning and expertise, and these facilitate the transmission of ideas (Anas, Arnott and Small 1998).

INDUSTRIAL SPECIALIZATION

The set of industries that stimulate wages and those that depress wages changes over time. (Detroit once prospered because it manufactured automobiles; now it suffers for the same reason.) In the period examined, the California economy, as did the national economy, underwent a significant transition. It shifted away from the production of goods and toward the production of information and ideas (Glaeser 1994).

This transition—from "mill-based to mind-based" (Bluestone, 2000) economic activity—resulted in a decreased emphasis on many traditional urban industries, such as manufacturing. Instead, there was increased emphasis on non-routine service sector work that requires formal higher education, such as law, medicine and the arts. These latter industries, which have been dubbed the "knowledge" economy, differ from older goods-based urban industries in the types of jobs they offer, the level of the wages they pay, and the requirements for employment in them (Drennan 2002).

At the national level, almost half the jobs in the knowledge industries are managerial, professional, or technical, and require at least a bachelor's degree (Drennan and Lobo 2009). These jobs also tend to pay well (McCall 1998), either as a result of greater efficiency, or—as James Galbraith (1998) has argued—because some knowledge-sector firms have quasi-monopolistic power. Such power enables them to reward their workers with wage premiums.

For purposes of this chapter, the important fact is that in California the transition into the knowledge economy has not taken place evenly. California has always had spatial disparities in both the location of knowledge industries and the college-educated people they employ. Between 1970 and 2000, these discrepancies widened. It is reasonable to suspect that this disparity would play some role in the divergence of California's wages.

HUMAN CAPITAL

In the United States, individuals with a college education or higher earn better wages than those who have not completed college. Moreover, the premium paid to college graduates has been increasing over time (Levy and Murnane 1992; Katz and Murphy 1992). The reasons for this trend are numerous. However, the favored explanation among economists is that technological change is "skill-biased," i.e., that it disproportionately benefits the educated.

These effects could be compounded by the erosion of various institutions that have traditionally protected the wages of the less-educated. Unionization rates have fallen steadily over the past several decades and the real value of the minimum wage declined throughout the 1980s and 1990s (Card and DiNardo 2002; Lee 1999). In a spatial context, places with high proportions of educated residents can be expected to have higher average wages than places with low proportions of educated people (Drennan 2002; Glaeser 2004).

IMMIGRATION

Immigration's influence on wages is a source of both academic and popular debate (Borjas and Katz 2005; Card 2005, Lowenstein 2005). California has more immigrants than any other state. Perhaps more importantly, it has more Mexican-origin immigrants and more undocumented immigrants, than any other state. At one point in the 1990s, it was estimated that California had fully 43 percent of the nation's undocumented immigrants. Mexican-origin immigrants generally, and undocumented Mexican immigrants in particular, lie at the heart of most debates about immigration's impact on wages.

Intuitively, immigration offers an explanation for the simultaneous economic decline and population expansion in inland California. If poor immigrants from rural Mexico and Central America are drawn to the interior by the prospect of agricultural jobs, they could drive up the population while at the same time depressing the average wage. But it is far from clear that immigration could reduce a region's average wage.

Even those researchers who argue that immigration depresses wages do not argue that it drags down earnings in the entire regional labor market (Friedberg and Hunt 1995; Lazear et al 2007). Rather they worry that immigrants will depress the earnings of the unskilled native born, such as high school dropouts (e.g., Borjas and Katz 2005). Although this assertion is controversial (Card 2005; Lang 2006), assume for a moment there is some validity to it.

Given that assumption, immigration could decrease the wages of the low-skilled native born and nevertheless *increase* the average wage region-wide. For example, immigrant domestic labor in some metropolitan areas enables native-born college educated women to increase their time commitment to work. If the gains to the skilled outweigh any losses to the unskilled, and the overall result is increased productivity, then the average wage could rise even as wages at the bottom fall.

DIFFICULTIES WITH THE COMMON EXPLANATIONS

All of these potential explanations overlap. Take, for instance, the hypothesis about industrial specialization. It could be argued that the large coastal MSAs transitioned more successfully into the knowledge economy while the interior MSAs remained more specialized in relatively declining industries. This rather straightforward argument is, however, difficult to prove.

The first problem is that industrial specialization is hard to measure. Some industries can be categorized as knowledge-based as opposed to goods-based. But it is hard to tell with available data whether the earnings generated by those industries in any given place are *export* oriented.

It is standard practice in economic development analysis to assume that productivity and wage increases in a metropolitan area are largely determined by that area's ability to sell goods and services to outside individuals and firms. Yet it is difficult to separate the export-oriented components of an industrial sector from the locally-oriented components. Earnings from law, for instance, could come from family attorneys doing local work or corporate lawyers who sell their services nationally or globally. The latter represents a movement into the knowledge economy; the former probably does not.

The second problem is that industrial structure is hard to separate from other factors. Population size, as mentioned, often drives industrial specialization.

And industrial specialization is itself tremendously difficult to disentangle from educational attainment. To a strong degree, industrial structure and labor force skill are jointly determined. The presence of skilled people can help incubate skilled industries. And the presence (or absence) of skilled industries helps determine both the skill levels of in-migrants. Educated people flock to places with a high demand for skilled work. Industry structure also determines investments in skill that are made by locals.

There are exceptions, of course. Skill level varies both within and across industries so that labor-force skill does not track perfectly with industrial structure. Indeed, there is some evidence that traditionally low-skill industries are reorganizing to include high-skill jobs (Gibbs et al 2004). Nevertheless, information-intensive industries tend to have more high-skill, high-wage jobs. More than anything else, knowledge industries are built on skilled people (Drennan 2002; Nelson 2005).

This observation raises a third potential problem: skill is often measured by educational attainment, but educational attainment is an imperfect proxy for ability. Productivity varies tremendously across people who have earned a college degree. Unmeasured differences between similarly-educated people might have a strong impact on productivity and thus wages.

Lastly, discussions about immigration's impact on wages become hard to separate from discussions about industrial structure and about education's impact on wages. Immigration is not monolithic. California's foreign-born population includes both urbane highly-trained software engineers and the illiterate rural poor. Location of skilled and unskilled immigrants will be determined in part by the job opportunities available in different places. The economic impact of unskilled immigrants is, after all, driven more by their being unskilled than by their status as foreign-born.

INDUSTRIAL CHANGE AND WAGE DISPERSION

While bearing these qualifiers in mind, it is possible to speculate as to how industrial change may have contributed to wage divergence in California. Education is the principal input to knowledge industries. One of the starkest differences between California's coast and its interior can be found in levels of educational attainment.

California has, on the whole, a larger share of college educated residents than the nation. Yet the great majority of these residents have, since the 1960s, lived on the state's coast. Probably, and not coincidentally, until 2003, all of California's major research universities were also in coastal metropolitan areas. Since 1970, the gap in the level of educational attainment between the coast and the interior has widened, even as education has grown more important as a determinant of earnings.

In the years between 1969 and 1979, across all 26 of California's metropolitan statistical areas, the simple correlation between the metropolitan average wage and the share of adults with a bachelor's degree or more was 0.27. For the time period 1989-2000, however, that correlation increased to 0.75. Yet during that same time levels of educational attainment in the coast and the interior continued to diverge.

POSSIBLE WAGE GAP EXPLANATIONS

Given the facts presented so far, three possible reasons can be suggested for the observed wage gap between the large coastal MSAs and the small

interior MSAs of California. First, changes in metropolitan industrial structure closely track changes in metropolitan educational attainment. Second, the effects of education and industrial upgrading can both positively influence the level of the average wage.

Third, it might be true that population size will interact with both industrial structure and educational attainment, and have a positive impact on the average wage. That is, there may be a wage benefit associated with a large MSA and a wage benefit associated with an educated populace. But there may also be additional independent effect that is generated by having educated people *in* a large place. Larger places, in other words, might obtain more from their educated people, in terms of productivity. Three reasons can be suggested why this phenomenon might occur.

The first explanation is unobserved differences across the college-educated. Large places, because they offer more labor-market opportunities and more consumption opportunities, might simply attract the most productive college-educated workers (Shapiro, 2006). If the most productive people migrate toward the most desirable places, productivity and wages will be higher in those places.

The second explanation is specialization. As noted earlier, using available data, it is difficult to tell if earnings from knowledge industries are actually part of a region's export base. However, it is reasonable to believe that a greater share of knowledge-sector earnings in larger places represents specialized, export-based activity. Thus the interaction of educational attainment and/or knowledge sector earnings with population size might represent a greater degree of export activity.

A final possible explanation, which is closely related to specialization, is that the interaction of size and industrial structure (or size and educational attainment) could proxy for the benefits of agglomeration; the better transmission of ideas and knowledge. Naturally, all three explanations may also be valid; they are not mutually exclusive. All posit that skilled people are more productive in larger places and that this increased productivity enhances the average wage.

THE INDUSTRIAL STRUCTURE OF COASTAL AND INTERIOR METROPOLITAN CALIFORNIA

Industrial specialization is measured by focusing only on those industries that are believed to produce traded goods and services. Those are industries whose output *could* bring in revenue from other places or that *could* be in competition with non-local firms for local markets. As noted above, whether these industries are export-based or not is impossible to determine with the data used. Local industries producing non-traded goods and services are viewed as endogenous to urban growth and therefore not a source of differences in growth across urban places.

Using an industry taxonomy developed by Drennan (2002), the traded goods and services industries are divided into two parts. The industries in each of our groups are two-digit North American Industrial Classification System (NAICS) industries.

The first category created is goods production and distribution, or GP&D. This sector consists of farming and related activities, mining, manufacturing, wholesale trade, and transportation and warehousing. GP&D is, essentially, the group of traditional economic

activities that drove almost all urban external trade through the first half of the twentieth century. GP&D has become less important with the rise of what is labeled the knowledge industries (information, finance and insurance, professional and technical services, educational services, health, and finally arts and entertainment). These industries are the more recent component of traded goods and services. They are notable for being a steadily-growing share of the U.S. economy, while the goods production and distribution sector is—for the most part—a contracting share (although many of the GP&D industries continue to grow absolutely).

Table 2. Earning by Traded Goods and Services Industries, 2006

	All U.S. MSAs	4 Coastal MSAs	12 Interior MSAs
Earnings (Millions of $)	**7,583,998**	**809,035**	**84,132**
Share of earnings by traded goods & services industries			
Farming, forestry & related	0.4%	0.2%	8.2%
Mining	0.9%	0.3%	1.5%
Manufacturing	11.6%	12.7%	8.7%
Wholesale trade	5.1%	4.4%	3.8%
Transportation & warehousing	2.4%	2.4%	3.7%
All goods production & dist.	20.4%	19.9%	25.8%
Information	3.8%	6.3%	1.4%
Finance & insurance	8.2%	8.0%	3.4%
Professional & technical services	10.2%	13.7%	4.0%
Education	1.3%	1.3%	0.5%
Health care & social assistance	9.2%	7.3%	10.1%
Arts, entertainment & recreation	1.1%	1.8%	0.5%
All knowledge industries	33.8%	38.4%	19.8%

Source: BEA

THE KNOWLEDGE SECTOR

The dominant industries in the knowledge sector are the producer services—high-wage industries such as finance, insurance, computer software, business consulting, law, engineering, architecture and other professional services. These industries essentially sell knowledge to firms, governments, and non-profit organizations. Previous research on urban industrial structure has shown that the largest metropolitan areas tend to be specialized in knowledge industries, particularly producer services.

Smaller metropolitan areas tend to be specialized in goods production and distribution industries (Black and Henderson 1999; Drennan 2002; Drennan and Lobo 2009). Data from the U.S. Bureau of Economic Analysis show that in 2003, almost 80 percent of metropolitan producer services earnings were generated in metropolitan areas with populations of one million or more. But these areas contained only 54 percent of the country's metropolitan population.

Table 2 shows that in 2006, the export bases of the interior metropolitan areas were not just smaller but also qualitatively different from the export bases of the coastal metropolitan areas. For comparison purposes, Table 2 also shows figures on traded goods and services for all U.S. metropolitan statistical areas in 2006 (this is NAICS data). In general, traded goods and services account for roughly one-half of metropolitan earnings (Henderson 1988), and this generalization holds for all U.S. metropolitan areas (54 percent of earnings) and for the four coastal California metropolitan areas (55 percent). For the 12 interior metropolitan areas, however, the share is markedly lower: 46 percent.

Coastal MSAs are also far more specialized in the knowledge sector, while the interior areas are more specialized in goods production and distribution.

The knowledge sector accounts for over 38 percent of earnings in the four large metropolitan areas, while the goods production and distribution sector accounts for 20 percent. The opposite is true for the twelve inland areas, which derive only 20 percent of earnings from the knowledge sector and 26 percent from goods production and distribution.

For all U.S. MSAs, goods production and distribution accounts for 20 percent of earnings, while the knowledge sector accounts for about 34 percent. Thus, the two sets of California places—inland and coastal—sit at opposite ends of the national distribution with respect to the knowledge sector. The coastal places have an above-average concentration of knowledge sector earnings while the inland areas have a below-average share.

THE GOODS PRODUCTION AND DISTRIBUTION SECTOR

GP&D share among the inland metropolitan areas is not just larger but also differently-composed than the shares in both coastal California and U.S. metropolitan areas as a whole. The largest part of the goods production and distribution sector in all U.S. MSAs and in the four California coastal MSAs is manufacturing. Manufacturing accounts for between 12 and 13 percent of earnings in both sets of places. The manufacturing sector is also the portion of GP&D that pays the highest wages.

In the twelve small inland MSAs, however, manufacturing accounts for less than nine percent of earnings. The high share of GP&D in the interior comes not from manufacturing but from unusually large shares in farming, forestry and related activities plus mining (which includes oil and gas extraction). These economic activities constitute almost ten percent of earnings in the inland metros, compared with one percent for all U.S. MSAs and well under one percent for the coastal MSAs. These activities are also characterized by concentrations of low-skilled workers and low pay.

The only portion of the knowledge sector where the 12 interior metros have earnings shares that surpass the coast and nation is the health care and social assistance industry. This is, unfortunately, one of the low-wage industries of the knowledge sector. Thus the 12 inland metropolitan areas have the worst of both worlds. Their economies are in general heavily biased toward GP&D. But their concentration is not in the one area of GP&D—manufacturing—that pays moderate to high wages. They are under-represented in the knowledge sector but over-represented in one area of that sector that pays poorly.

IMMIGRATION AND EDUCATION

Compared to the coastal metropolitan areas and to California as a whole, individuals in the twelve interior MSAs are poorer, less educated, and more likely to be Hispanic. They are *not*, however, more likely to be immigrants. Table 3 shows the percentages of the population in 2000 that were Hispanic, foreign-born, and foreign-born from Mexico for the twelve interior MSAs. It shows them for the coastal places, too, as well as the state and the nation.

Of the four coastal MSAs, Los Angeles has by far the largest share of Hispanics: 41 percent. High as that is, six of the 12 interior MSAs have even higher shares. El Centro is 72 percent Hispanic. Only two of the interior places have lower Hispanic shares than San Francisco's

low share of 18 percent. Those are Chico, 11 percent, and Redding, six percent.

The coastal places and the interior places, however, are not much different in their shares of the foreign-born. Coastal MSAs range from a high of 35 percent (Los Angeles) to a low of 22 percent (San Diego). Interior MSAs range from a high of 32 percent (El Centro) to a low of four percent (Redding). Thus, Los Angeles has a greater share of foreign born than any of the 12 interior places, as does San Jose.

Table 3. Characteristics of Individuals in 12 Interior and Four Coastal MSAs, 2000

	Percent Hispanic	Percent Foreign Born	Percent Foreign Born from Mexico
Bakersfield	38.4	16.9	74.4
Chico	10.5	7.7	44
El Centro	72.2	32.2	94.1
Fresno	44	21.1	66.4
Hanford-Corcoran	43.6	16	79.5
Madera	44.3	20.1	86.4
Merced	45.3	24.8	69.9
Modesto	31.7	18.3	62.2
Redding	5.5	4	23.9
Stockton	30.5	19.5	51.5
Visalia-Porterville	50.8	22.6	82.4
Yuba City	20	13.2	51.6
Los Angeles	41.4	34.7	44.5
San Diego	26.7	21.5	48.2
San Francisco	17.8	27.4	38.9
San Jose	24	34	24.4
California	32.4	26.2	44.3
United States	12.5	11.1	29.5

Source: U.S. Census, 2000

MEXICO AS A POPULATION SOURCE

The dramatic difference among the two groups of places is shown on the last column of Table 3, the percent of the foreign born from Mexico. The twelve interior MSAs have far higher shares of foreign-born from Mexico than the four coastal MSAs with a few exceptions. Only two of the interior places have shares below that of the coastal place, San Diego, with the highest share: 48 percent. Indeed, ten of the twelve interior MSAs have well over half of their foreign born from Mexico, ranging from 52 percent (Stockton) to 94 percent (El Centro). Almost all of the California places listed in Table 3 have shares in each category far above the national shares.

OTHER CHARACTERISTICS

Table 4 presents social and economic characteristics from the 2000 *Census* for the four coastal MSAs and the twelve interior MSAs compared with California and the United States. Here the differences are stark. The twelve interior places are far less educated, less likely to be in the labor force, and poorer. In the coastal MSAs, shares of the adult population with a bachelor's degree or more range from a high of 40 percent in San Jose to a low of 26 percent in Los Angeles. None of the 12 interior MSAs have as high a share as Los Angeles, ranging from a high of almost 22 percent in Chico to a tie for low of 10 percent in three places: El Centro, Hanford-Corcoran, and Yuba City. By contrast the California share is almost 27 percent and the national share is 24 percent.

Labor-force participation in the four coastal places is well over 60 percent, except Los Angeles at almost 62 percent. In the twelve interior places only four locations - Fresno, Modesto, Stockton, and Visalia-Porterville - are at 60 and 61 percent. El Centro is the lowest at 49 percent.

The facts brought out in Table 3 and 4 are consistent with previous research suggesting that immigrants to the interior are for the most part poorly-educated rural Mexicans who work poverty-wage agricultural jobs (Taylor and Martin 1997, Taylor, Martin and Fix 2006). Again, however, the influence of immigration on the wage is more likely to be a result of the immigrants' skill levels and the opportunities available to them. It is not a result of their place of origin *per se*.

CONCLUSION

Figure 1 showed that wage divergence in California began in earnest sometime in the 1980s, and accelerated in the 1990s. The analysis in this chapter offered some explanation for this fact. It has been well documented that in the period covered, metropolitan economies of the United States were becoming more concentrated in the knowledge sector. They were becoming less concentrated in the goods production and distribution sector, especially the large metropolitan economies. As recently as 1970, the goods production and distribution share of metropolitan economies was about double the share of the knowledge sector (Drennan 2002).

Table 2 shows that the sectoral mix has been reversed and that the shift in the nation's metropolitan economies was mirrored in California. As the knowledge economy (and its primary input, formal education) became more important in the 1980s and 1990s, its influence on wages grew. In the nation, the knowledge sector is heavily concentrated in MSAs with populations above one million. In California, all such large metros are on the coast, excluding the state's capital, Sacramento. Thus, the increasing dominance of the knowledge sector across the nation favored the large coastal MSAs of California.

RETURNS TO SKILL

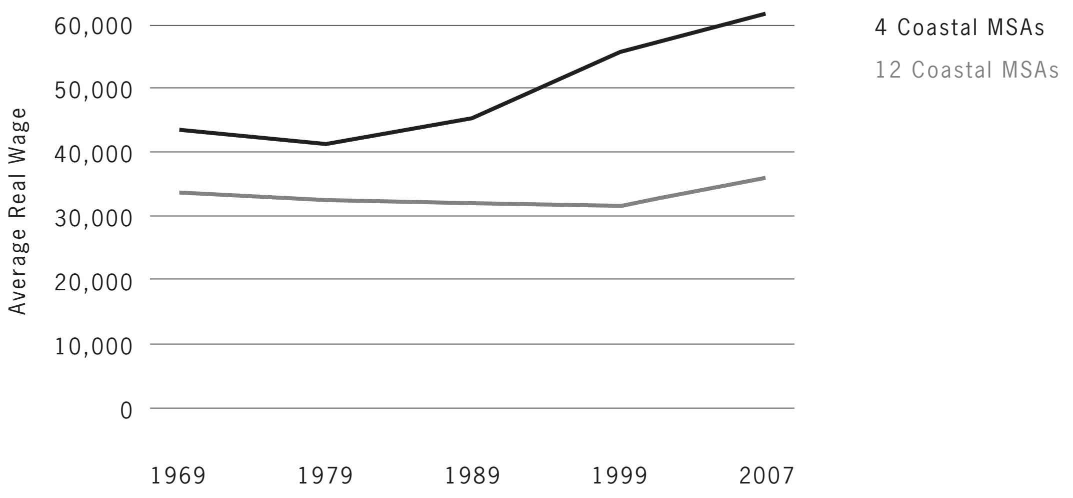
The returns to skill help explain why coastal wages grew much faster than interior wages. But they do not necessarily explain why wages in the interior MSAs showed such anemic growth and even decline over 38 years. Nor does this study shed light on the variation of wages within a given metropolitan area. Certainly, MSAs such as Los Angeles and San Francisco have their share of economic distress, which a high regional average wage can mask. Future research should use individual-level wage data to assess more closely the economic well-being of individuals within these regions.

Table 4. Social and Economic Characteristics in Large Coastal and Small Interior MSAs, 2000

MSA	Percent with BA or Higher Degree	Labor Force Participation Rate	Percent in Poverty	Percent Households Not Speaking English at Home
4 Large Coastal				
Los Angeles	26.2%	61.7%	16.2%	51.2%
San Diego	29.5%	65.0%	12.4%	33.0%
San Francisco	38.8%	65.8%	9.1%	35.0%
San Jose	40.4%	67.1%	7.5%	45.4%
12 Small Interior				
Bakersfield	13.5%	56.5%	20.8%	33.4%
Chico	21.8%	56.8%	19.8%	12.5%
El Centro	10.3%	49.4%	22.6%	67.8%
Fresno	17.5%	59.9%	22.9%	40.8%
Hanford-Corcoran	10.4%	51.1%	19.5%	36.7%
Madera	12.0%	53.5%	21.4%	37.0%
Merced	11.0%	59.5%	21.7%	45.2%
Modesto	14.1%	61.2%	16.0%	32.4%
Redding	16.6%	57.3%	15.4%	6.5%
Stockton	14.5%	59.8%	17.7%	33.7%
Visalia-Porterville	11.5%	59.8%	23.9%	43.8%
Yuba City	10.3%	57.6%	20.8%	21.9%
California	26.6%	62.4%	14.2%	39.5%
United States	24.4%	63.9%	12.4%	17.9%

Source: U.S. Census 2000.

Figure 1. Average Real Wage, Coastal & Interior MSAs, 1969-2007 (2007 $)



THE POLICY DILEMMA

From a policy perspective, the small interior MSAs of California present a dilemma. Declining regions usually undergo natural, albeit painful, corrections when their residents leave (Pritchett 2004; Christopherson et al. 2004). In inland California, however, falling real wages have been accompanied by surging population *growth*. Whether this growth is harmful is a difficult question. A large portion of the population growth in the interior seems to be the result of unskilled immigration. It is possible that the presence of unskilled immigrants prolongs the interior's dependence on primary production activities like agriculture, which pay low wages. But there is little reason to think that a decreased dependence on primary production will usher in a new industrial regime. Nor is there any reason to believe that having fewer unskilled residents will prompt an in-migration of educated citizens.

Indeed, one of the interior's problems may be that the two forms of traded goods and services share so few inputs. In 1969, the large coastal MSAs had sizeable GP&D industries, but they also had large (for that time) stocks of educated people and nascent knowledge agglomerations. When manufacturing and other goods production industries contracted, these MSAs were able to move more easily into producer services and other parts of the knowledge sector. But the less-skilled, less educated *individuals* in GP&D occupations were not necessarily able to move into knowledge industries.

ATTRACTING KNOWLEDGE INDUSTRIES

One approach for policymakers in the interior is to attract knowledge industries. But attracting such industries will be of limited benefit to the unskilled workers who currently live in the interior. Furthermore, even assuming that programs to create or attract knowledge industries work is a large assumption, given that industrial incentive programs are often quixotic (Fisher and Peters 1998; 2004). Frustrating though it may be to admit, after decades of study academics still have few good answers about why certain industries locate in certain places.

To a certain extent industrial location reflects little more than historical contingency. Industries start in one place and tend to stay there, e.g., Hollywood. Exogenous demand shocks can either catapult these industries and the places that host them forward (such as computers in Silicon Valley) or send them spiraling into decline (automobiles in Detroit). When industrial geography is something that everyone can explain after the fact but no one can predict before, there is little guidance for policymakers. There is an obvious political appeal of programs designed to turn wayward regions into high tech centers but their efficacy is uncertain.

BOOSTING EDUCATION

Another approach is to focus on education. Certainly higher education is a long-term answer for the young in California's interior. However, anyone endorsing education as a solution for these areas should be aware that individuals in declining places will, once

educated, probably leave. Those who are educated will benefit. But the places from which they depart will not. Nevertheless, economic development in California should be first about helping people and only second about helping places.

THE IMMIGRATION CHALLENGE

The people-place distinction is perhaps most acute in the case of immigration. It seems likely that the low levels of educational attainment in California's interior reflect, at least in part, a steady influx of poorly-educated immigrants. So it is possible that immigration has had an indirect influence on wages in the interior. But a proper analysis of immigration requires consideration of its impact, not just on the places that receive the immigrants, but also on the immigrants themselves.

In 1999, the per capita income in Mexico was about $4,500. In rural areas of Mexico it was much lower. Thus, almost every immigrant who came to the twelve interior MSAs in California was made better off as a result. But where immigration makes *people* better off, it can make *places* relatively worse off.

The arrival of poor people increases the poverty rate, even if immigrants, once they arrive, are *less* poor than they once were. Anti-poverty benefits of immigration are international, but immigration's costs—both economic and political—are often local. Resolving this tension will be a challenge for California in general, and for its interior in particular.

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ENDNOTES

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7

SHADES OF GRAY

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7

"Sometimes you will fail and be blamed for things you had absolutely nothing to do with."

—Former Governor Gray Davis
Keynote speech to Columbia University
Law School graduation, May 21, 2009[1]

Gray Davis, the 37th governor of California, took office in 1999 in a period of prosperity. Unlike his two predecessors, Pete Wilson and George Deukmejian, both of which became governor in periods of budget crisis, Davis—thanks to what would eventually be known as the dot-com boom—was initially blessed with state revenue. By the time he ran for re-election in 2002, he was dealing with a major fiscal problem that eventually led to his recall a year later. His successor, Arnold Schwarzenegger, promised to fix the state's budget problems and without a tax increase. Yet Schwarzenegger found himself mired in another budget crisis during his second term. Given that later history, in hindsight can Davis be blamed for the fiscal problems that led to his recall?

Not surprisingly, there is not a clear-cut answer to that question. But it can be said that the style of Governor Davis' leadership left him vulnerable to crisis. It can be said that despite the prosperous times in which he was initially elected, the state's proneness to budget crises was apparent. And, it can be said that his successor was naïve about the difficulty of changing the institutional structure of the budget process.

DIFFERENT PERSONALITIES

"I have prepared my whole life for this moment."

—Governor-Elect Gray Davis
Shortly before taking office[2]

Davis and Schwarzenegger were very different in background and personality. Davis, a Democrat, was a lawyer by training and was a career politician.[3] He served as chief of staff to Governor Jerry Brown and subsequently became a state assemblyman, controller, and then lieutenant governor. In the 1998 Democratic primary, Davis ran against two wealthy and self-financed candidates, seemingly as the dark horse in the race. Yet his two rivals managed to defeat each other and Davis emerged as the winner in the primary. Davis based his campaign on his political experience and promised that his focus, if elected governor, would be on education. In the November general election, he easily defeated his Republican opponent, Attorney-General Don Lungren.

Arnold Schwarzenegger ran in the 2003 recall as an outsider—not a politician—who would clean up state politics. Although it was his movie career that made him a high-profile candidate, he emphasized his business background which would allow him to rid the state of governmental waste and inefficiencies. Because he was wealthy, Schwarzenegger argued, he would not have to depend on special interests.

Schwarzenegger was most successful in terms of public approval when he displayed optimism and humor—and least successful when he seemed combative. In contrast, Davis retained the image of a somewhat stand-offish career politico. Despite these sharp differences in public personas, Governor Schwarzenegger ended up facing a budget crisis at least as severe as the one that defeated Davis in the recall. After a series of ballot propositions related to the budget were rejected by voters in a May 2009 special election, words such as "Armageddon" and images of California driving off a cliff were regularly used.

UP AND DOWN: A BUDGET SUMMARY OF THE DAVIS YEARS

"Their job is to implement my vision. That is their job."
—Governor Gray Davis
discussing the role of the legislature[4]

Table 1 provides data on budget proposals made during Governor Davis' period in office. Except for proposals made in 2003, the proposals are the initial ones made in early January for the coming fiscal year beginning the following July 1. For 2003, the table shows both the January and the "May revise" proposal; the May revise of 2003 was the last proposal made by Governor Davis because of the recall in October of that year.

Proposals are not the same as the adopted budget ultimately passed by the legislature. But they do show the intentions of the governor. Yet they can be misleading. The table indicates that Governor Davis repeatedly—until the very end—submitted budgets that were expected to deplete the General Fund reserve. (We avoid the words deficit and surplus to describe these changes in the reserve because budget proposals are not confined on the receipt side to revenue but rather also include "transfers" from outside the general fund, including borrowing.) However, Governor Davis was not necessarily being profligate.

During the dot-com boom, revenue kept rising faster than forecast, even relative to what was projected half way through the ongoing fiscal year. (Table 1 shows that projection as well as the proposal for the next fiscal year.) In the late 1990s, revenue from capital gains related to stock market and employee stock option capital gains poured into the state treasury. Although spending was being ramped up, in effect the legislature could not keep up with the inflow.

Table 1: General Fund Budget Proposals By Governor Gray Davis ($ Billions)

	January 1999		January 2000	
	Estimate for 1998-99	**Proposal for 1990-00**	**Estimate for 1999-00**	**Proposal for 2000-01**
Revenue & Transfers	$56.3	$60.3	$65.2	$68.2
Expenditures	58.3	60.5	65.9	68.8
Change in Reserve	-2.0	-0.2	-0.7	-0.6
End of FY Reserve	+1.1	+0.9	+3.0	+2.4

	January 2001		January 2002	
	Estimate for 2000-01	**Proposal for 2001-02**	**Estimate for 2001-02**	**Proposal for 2002-03**
Revenue & Transfers	$76.9	$79.4	$70.9*	$79.3
Expenditures	79.7	82.9	78.4	78.8
Change in Reserve	-2.8	-3.4	-7.5	+0.5
End of FY Reserve	+6.6	+3.1	+1.5	+2.0

*The Davis administration treated a loan for electricity purchases in 2000-01 repaid by rate-payers in 2001-02 inconsistently. It was treated as part of revenue and transfers in the January 2002 estimate for 2001-02 but not included as an expenditure in prior presentations. This treatment has been corrected in the table above.

	January 2003		May 2003	
	Estimate for 2002-03	**Proposal for 2003-04**	**Estimate for 2002-03**	**Proposal for 2003-04**
Revenue & Transfers	$72.2	$73.1	$70.8	$70.9
Expenditures	76.8	75.5	78.1	70.4
Change in Reserve**	-4.5	-2.3	-7.3	+0.5
End of FY Reserve**	-2.1	-4.5	-9.3	-8.8
End of FY Reserve with Proposed Borrowing***	na	na	+1.4	+1.9

**Excludes proceeds from proposed borrowing of $10.7 billion proposed for 2002-03.

***Includes proceeds from proposed borrowing of $10.7 billion proposed for 2002-03.

na = not applicable.

Note: Details need not sum to totals due to rounding. Source: California Legislative Analyst's Office.

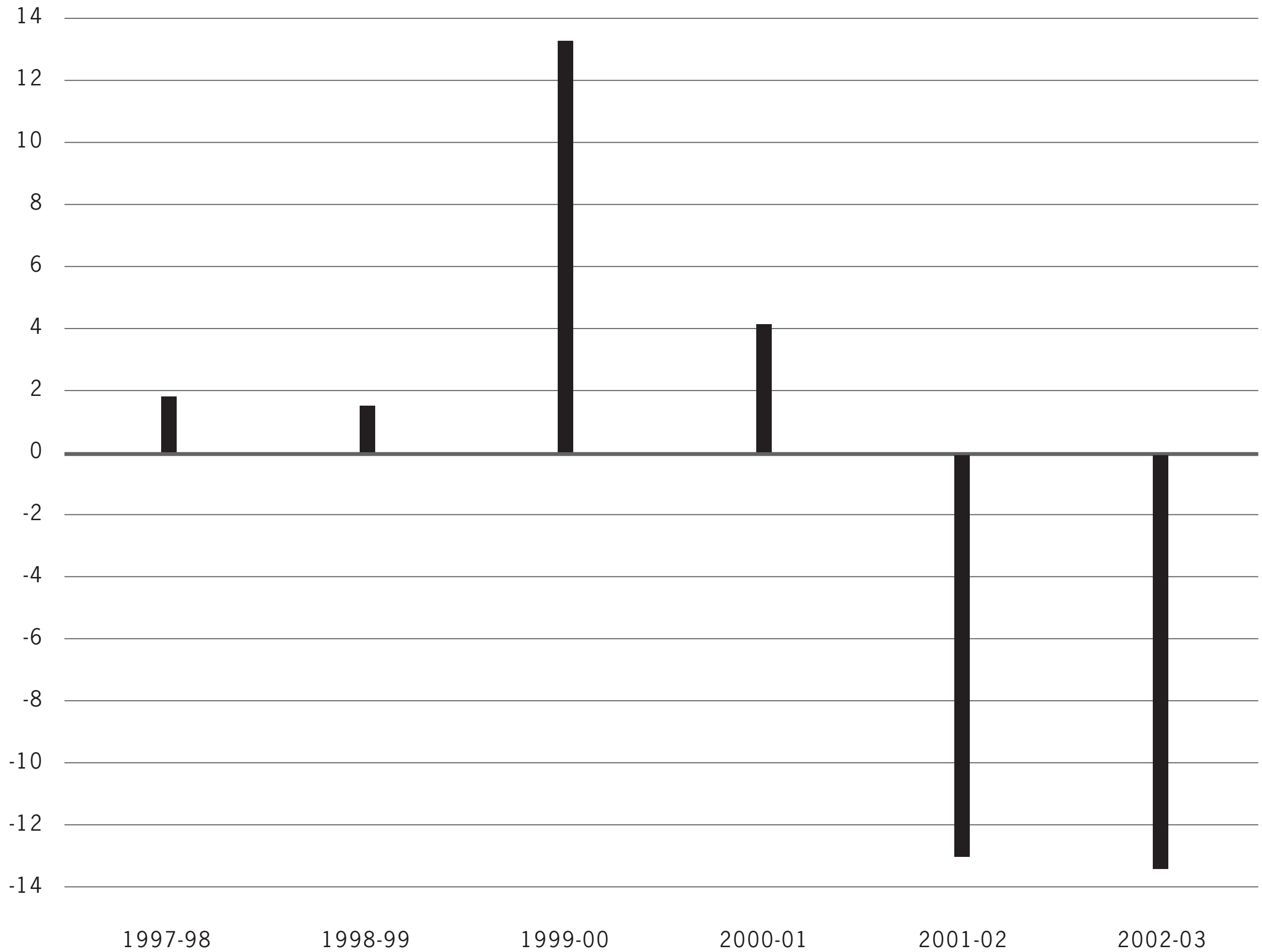
And during the upswing, Davis may well have counted on positive budget "surprises" to develop after his preliminary January proposals.

Chart 1 shows the end-of-fiscal-year reserve as a percent of expenditures for that year. Note that at the peak, the reserve was roughly one eighth of general fund spending, a "rainy-day fund" target that Governor Schwarzenegger later tried to mandate via a ballot proposition in May 2009, but failed. The chart also shows how fast even such a large reserve can be dissipated.

In a little more than a year, the reserve went from roughly one-eighth positive to one-eighth negative! Toward the end of the period shown, the state was dependent on short-term borrowing to finance its deficiency in the general fund. Governor Davis then proposed refinancing California's debt through a legally-questionable long-term borrowing scheme which his successor essentially adopted and legalized via two ballot propositions in 2004.

It is not surprising that a governor's popularity would be enhanced by a good economy and generous budgets and that the reverse would occur in Hard Times. However, as will be described below, during the good years the leadership style of Governor Davis and his cool relationship with legislators in both parties brought him few allies. When the recall threatened, in large part because of the budget crisis that had developed, he had few friends to which he could turn.

Chart 1: End-of-Year General Fund Reserve as Percent of Annual Disbursements



TAKING OFFICE

"Too many families of every ethnicity have thrown up their hands in frustration, concluding they have no choice but to send their kids to private or parochial school. I say enough is enough. The time has come to restore California's public schools to greatness!"

—Governor Gray Davis
1999 inaugural address[5]

The threat of an eventual budgetary debacle that would lead to his 2003 recall was not part of Governor Davis' thinking when he took office. As in all bubbles, there was much rationalizing in the financial press as to why the stock market—especially the dot-coms—could go on rising at a rapid pace indefinitely. The fact that many dot-com startups seemed unable to turn a profit was a matter of discussion, but was often dismissed as a sign that the new technology was in the early stages of maturing. Profits justifying the current stock prices would surely appear in the future.

In 1999, a book entitled *Dow 36,000* appeared, encapsulating this mania.[6] The book's argument ran that the business cycle was disappearing. Stocks generally were not as risky as was once the case and therefore were undervalued, according to its authors' analysis. Once stocks came to be perceived as essentially riskless by the market, the Dow-Jones Industrial Average could rise to 36,000.

Davis' 1999 inaugural address focused heavily on improving education, his major campaign theme. But he also pledged to end "wedge issue politics," a slam at his predecessor, Pete Wilson, who was in attendance at the ceremony and who had won re-election in 1994 in part on the issue of illegal immigration. Thus, Davis—from the start—exhibited a combativeness that impeded his relations with the legislature and even his own top administrative officials. Later in the year, for example, there was a high-profile spat between Davis and Lieutenant Governor Cruz Bustamante about how to deal with the lawsuit —left by Wilson—defending Proposition 187. Prop 187 attempted to deny state services to illegals and was largely struck down through litigation.[7]

It also soon became apparent that Davis had a strong tendency toward micro-management and against delegation, even delegation to top appointees. This tendency was initially explained by his press secretary as simply matter of administrative start-up. "It's important that the people he appoints understand where he wants to go," the aide said.[8] But in fact the tendency persisted throughout the Davis era, leading to paralysis of decision making and to a lack of support for the governor when the recall challenge developed.

In the early years, however, Davis' micro-managing style was something to joke about. "We have a simple policy," he said. "I'm the only one elected in this administration."[9] But even then, Davis' need for micro-managing showed up in the form of unfilled vacancies in many state positions. "The governor has spent a tremendous amount of time on the appointment process," an aide explained.[10] That was precisely the problem.

THE FIRST BUDGET: 1999-00

"I am disappointed that I do not have more resources to allocate to programs that I want, but I have to bring this budget into balance."

—Governor Gray Davis
announcing his first budget[11]

When it came to his budget proposals for 1999-00 unveiled a few days after the inauguration, education was again the centerpiece with proposals ranging from pre-school programs to higher education. A general theme would be that there would be more money for

education but on the other hand there would also be more accountability for student outcomes. Davis suggested that parents should sign formal contracts with schools to enhance their children's academic advancement. Shortly after the budget announcement, the governor was photographed reading *"The Little Engine That Could"* to elementary school students, a symbolic scene that later was repeated for national television.[12]

Overall, however, the new budget was based on revenue projections that were conservative. Senate Republican leader Ross Johnson noted that the stock market was bringing in capital gains and termed Davis' projections as "pessimistic."[13] Groups that might have expected more generous results from a Democrat expressed disappointment over the tightfisted proposals.

Public-sector unions noted that the budget contained allowances for only modest pay gains. Teachers' union spokespersons were cautious about the governor's proposals for tests and performance reviews. Local officials complained that revenues allocated for their level of government were inadequate. However, budget director Tim Gage said the governor "didn't want to be overly optimistic and miss the mark on the high side."[14]

In effect, Davis was positioning himself as fiscally prudent. Since the actual budget would not be adopted before the May revise, any positive revenue surprises could then be incorporated. Positive surprises began to accumulate as soon as February when Legislative Analyst Elizabeth Hill pointed to good economic news and projected further revenue increases as a result. By March, larger-than-budgeted pay raises for state employees were negotiated by the Davis administration. Apart from direct pay increases, Davis shored up his relationship with organized labor—private sector as well as public—by agreeing both to improved state labor standards and to upgraded labor standards enforcement. But he also tilted conservative through such gestures as refusing paroles to convicted murderers.

Despite Davis' centrist balancing, Republicans in the legislature preferred tax reductions to his new programs. On the tax day April 15th, they called for various tax cuts, including eliminating the Vehicle License Fee ("car tax"), a property tax on cars collected by the state for local governments. The state would then compensate local governments for the resulting losses in revenue. Under former Governor Wilson, a staged reduction of the car tax had already been set in place, but not total abolition.

THE MAY 1999 REVISE

By the time of the 1999 May revise, revenue projections had been raised by $4 billion since the January budget proposal. Governor Davis now proposed various infrastructure project— something that business interests supported—although in the past many such projects were financed by earmarked taxes and trust funds rather than the general fund. More money would go to schools—including bonuses for teachers —and there would be bigger pay raises in the revised plan for state workers.

Some tax cuts were included but these would be delayed beyond the budget year. That proposal became a sticking point for Republicans. GOP assembly leader Scott Baugh said his members "will not accept that there is no place for taxpayers at this bountiful table."[15] Assemblyman Tom McClintock threatened that an initiative would be put on the ballot to abolish the car tax, a tax he characterized as "outmoded and mean-spirited."[16] McClintock's partner in this endeavor would be People's Advocate, the group that was eventually to sponsor the 2003 recall. The notion of a bountiful table was reinforced shortly after the

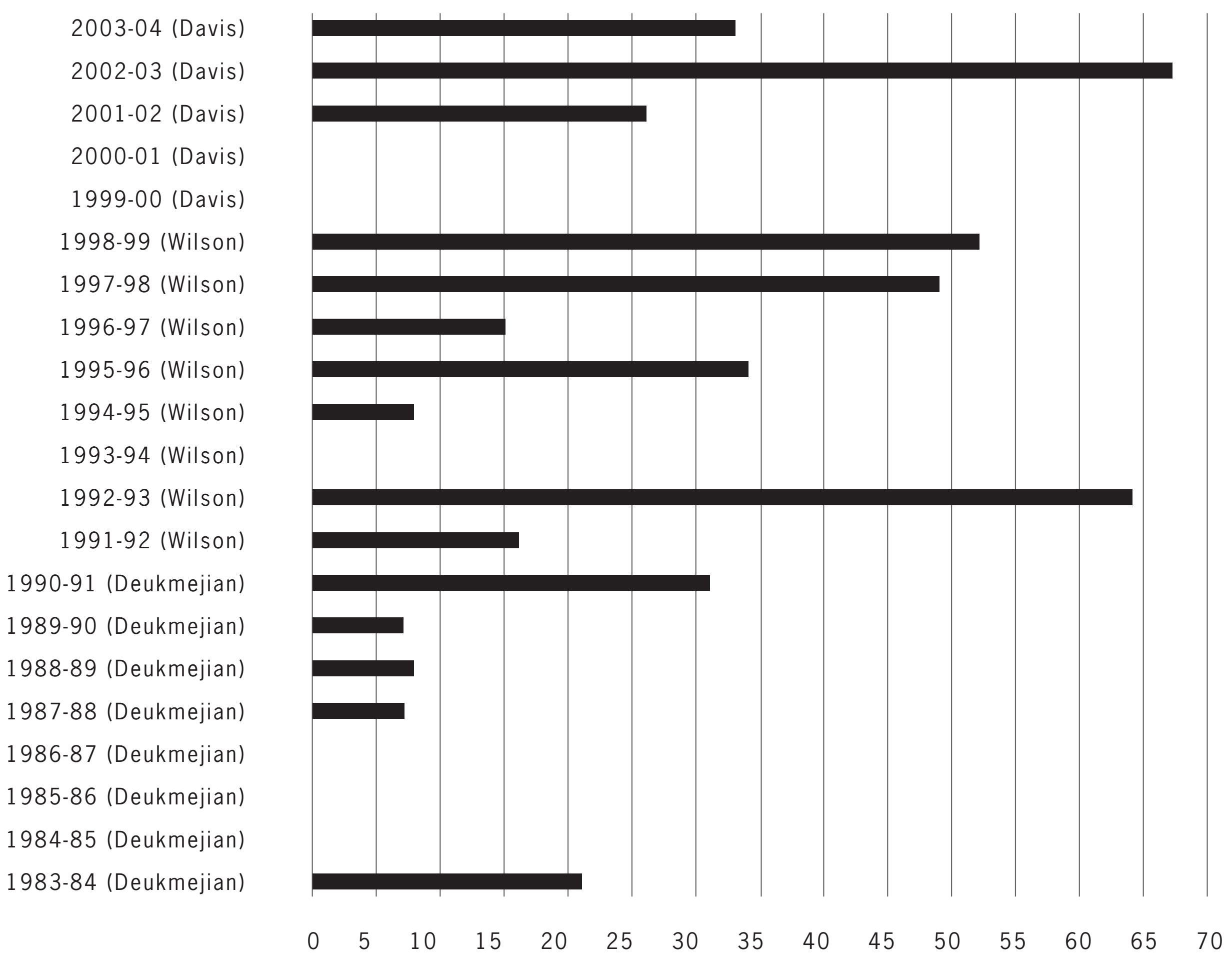
May revise when the Legislative Analyst projected still more revenue than Davis had assumed in his revision.

Governor Davis was anxious to bring in a budget deal on time—in principle even by June 15, the date the legislature is supposed to be finished with it. Such a timely enactment would be seen as a change from the notable delays that had characterized the Wilson era. As Chart 2 shows, Pete Wilson had only one on-time budget; his predecesso—George Deukmejian—had experienced only two major delays, both in times of budget crisis. With the threat of a car tax initiative and with pressure from legislative Republicans in mind, Davis agreed to a reduction in the car tax. That cut was later to figure in the 2003 recall when he temporarily reversed it.

A DEAL IS REACHED

The legislature did not quite meet the June 15 deadline but seemed close to reaching a deal with Republicans, a few of whose votes were needed to reach the required constitutional two-thirds supermajority. Essentially, Republicans bargained for further tax cuts at the margin, such as adding truckers to the car tax cut, and for a credit for research and development for business. The budget was enacted on June 16, one day after the official deadline but well before the start of the new fiscal year on July 1. However, it took until June 30 for the governor to sign off on the budget and announce various line-item vetoes totaling over a half

Chart 2: Days of Budget Delay Beyond June 30 Until Signing



billion dollars, a sign of the detail-orientation that characterized Governor Davis.

As part of the accord, Davis had the legislature cut out the chairing role of the Lieutenant Governor—who had feuded with him over the Prop 187 litigation—in a new commission to deal with the upcoming 2000 federal Census. The governor's vetoes included various "pork" projects in Republican districts which GOP legislators insisted they had been promised as part of the budget negotiations. Davis spokesperson denied the governor had gone back on his word.

Davis himself said that he couldn't let Republicans keep all the pork they wanted while cutting pet projects desired by legislative Democrats. But the controversy created a climate of mistrust. Republican senator Jim Brulte noted that "we work here on a system of good faith and trust" and that that Republican leaders believed that Davis "did not keep his word."[17]

It was not only Republicans who expressed concerns about the governor. Various education bills supported by Davis were before the legislature. The Davis administration put pressure on balking Democratic legislators in ways they considered inappropriate. After the governor was quoted as saying it was the job of the legislature to implement his vision, some legislative Democrats made their unhappiness semi-public. Senate president John Burton simply said he had "a different point of view on the matter."[18] Meanwhile, another gubernatorial feud with Democratic state controller Kathleen Connell was also being reported.

While times were good, however, such conflicts were largely the concerns of state political junkies, not the general public. Davis was able to cultivate his image as a tough-minded centrist with a bent for improving education and fighting crime. And by the fall of 1999, it was apparent that revenues were again exceeding projections.

Calendar 1999 came to a close with various groups pushing for ways to spend the funds that the stock market kept adding. Republicans wanted more tax cuts. The California Teachers Association (CTA) threatened to sponsor a ballot initiative to earmark more money for schools unless it was delivered legislatively in the next budget. Infrastructure improvements, accelerating the opening of UC-Merced, student fee reductions in public universities, all were being on the table for potential funding.

YEAR TWO: PROSPERITY

"California is flush."

—Governor Gray Davis
presenting his budget for 2000-01[19]

As the new calendar year opened, much of the pre-budget debate revolved around education funding. CTA wanted per-pupil spending raised to the national average. But the Davis administration resisted anything that costly. One advisor to the governor argued that voters were not interested in abstract numerical goals. "We polled it and focus-grouped it during the campaign… It's simply not where people are," the advisor noted.[20] Davis preferred particular targeted education programs such as special rewards for good teachers, increased teacher training in state higher-education institutions, rewards for college grads to go into teaching, and such.

Competing with possible spending on education was a court decision voiding a fee on out-of-state cars brought into California, mainly by newcomers to the state, ostensibly for their "smog impact." The fee had been imposed in the Wilson budget crisis of the early 1990s and would now have to be refunded to those who had paid it. Governor Davis also had spending objectives related to social welfare programs. The goals

included pay raises for state-paid home care aides and expansion of health insurance for children of the working poor. Davis also supported a ballot measure scheduled for March 2000 that would reduce the popular vote required for school bonds to be approved from two thirds to 55 percent.

THE JANUARY PROPOSAL

When the budget proposal was unveiled in early January 2000, public discussion continued with educational interests pressing to increase per-pupil spending. Republicans were pushing for more tax cuts than the governor had suggested and asking for more funding to be returned to local governments. In two respects, Davis seemed to be returning to his early apprenticeship as chief of staff to former Governor Jerry Brown. Brown accumulated a large reserve in the general fund—often viewed as a factor in the passage of Proposition 13 which drastically cut property taxes in 1978. Angry property taxpayers saw their tax bills rising at the local level while the state enjoyed a large and growing reserve.

Davis also wanted to add funding to the reserve. He was aware that relative to the 1970s, the state had become more dependent on the stock market to generate capital gains tax revenue. Any reversal in the market could undermine state finance. Perhaps sensitive to Davis' concerns, Assembly speaker Antonio Villaraigosa proposed a ballot initiative that would halt scheduled cuts in the Vehicle License Fee (car tax), with the money to go for education.

Jerry Brown was also famous for his disdain of the large-scale public works projects that had characterized the era of his father, Governor Pat Brown. In 2000, Davis was criticized for failing to address transportation and congestion adequately. While Davis supported the idea of cutting the hurdle for voter approval of school bonds to 55 percent, he did not endorse a related proposal that would allow voter approval of transportation taxes by only 55 percent. The governor did eventually support the idea of limited use of general fund revenue for transportation projects and a bond measure for transportation to be put to voters.

Yet it was hard to adhere to a posture of fiscal restraint in the face of continuous positive budget surprises. Only a few days after Davis formally presented his January proposal for 2000-01, Legislative Analyst Elizabeth Hill projected that revenues would in fact be $3 billion higher than he had forecast. The chair of the Senate's Republican caucus Jim Brulte (who was soon to become minority leader) commented that "we can do everything Governor Davis wants, as well as what we'd like to do."[21] Since Republican votes would be needed to pass a budget even in prosperous times, it would be hard to say "no" to their agenda when there was money around for so much else.

Apart from the governor, there was recognition—at least in some quarters—that a budget based heavily on the rapidly-advancing stock market could suffer a sharp reversal if the capital gains went away. But it was tough to keep from partying in the face of the substantial revenue inflows. State School Superintendent Delaine Eastin—a Democrat but like others in a tenuous relationship with the governor—in particular pushed for more educational spending than Davis had proposed.[22] During the spring, the spat over education funding continued. There was debate over how many dollars would be required to bring state per-pupil spending to the national average. And CTA continued gathering signatures for its ballot initiative to force such spending.

GANN AGAIN?

One possible check on the growing demands for state spending was the long-irrelevant Gann Limit. In the aftermath of Prop 13, voters passed Prop 4 (dubbed the son of Prop 13), which capped state spending according to a formula. The Gann Limit quickly became irrelevant due to the recession in the early 1980s that brought down spending well below the limit.

Gann resurfaced briefly in the form of a required tax rebate during Governor George Deukmejian's second term in the late 1980s when the limit was hit. But that episode triggered Prop 98 of 1988 which earmarked funding for K-14 via two formulas and partly gutted Gann. The gutting was completed two years later by another initiative—Prop 111—that also added an additional formula to Prop 98. A final blow was the recession of the early 1990s, which—as had the recession of a decade before—brought down state spending. However, with the recovery in the late 1990s and the stock-market related revenue surge, it appeared that even gutted Gann might become a constraint.

With hindsight, it appears that the Gann limit was ultimately exceeded although no one knew at the time and no explicit Gann-mandated tax rebate ever resulted. Nonetheless, the revival of Gann did have the effect of putting a constraint on the eventually-enacted 2000-01 budget. The constraint arose particularly because Davis—shortly before the May revise—acceded to additional education funding. He made a deal with CTA in which the union's proposed ballot initiative was dropped.

With more educational spending, there was less room for the many other proposals and demands that were surfacing. The May revise combined the deal with an income tax rebate which was not technically linked to Gann. A final cherry on the budget sundae was a proposed exemption of school teachers from the income tax.

FROM MAY REVISE TO FINAL DEAL

The notion of a total income tax exemption for teachers did not find a warm reception in the legislature, partly because of concerns that other professions might also demand similar treatment. CTA was not keen on the exemption idea, fearing it would stir voter resentment against teachers. Other ideas were floated such as a limited tax credit or a cut in teacher pension contributions. How a more general income tax rebate would be handled was also a sticking point.

It was argued that an income tax rebate would be partly diverted to the federal government since state income taxes are deductible from income declared on the federal income tax. Democrats pushed for an alternative sales tax rebate of some type. Republicans wanted a guarantee that future scheduled cuts in the Vehicle License Fee (car tax) would not be impeded by other elements in the budget. The wrangling over tax cuts and rebates led to delays beyond the official June 15 deadline for the legislature to enact a budget.

With Republicans focused on the car tax, eventually the tax rebate plan was scrapped and an increased cut in the car tax was substituted. The reduction in the car tax previously scheduled for 2004 was shifted into the 2000-01 budget. In a move to make the car tax cut visible, motorists would receive rebate checks back in the mail for part of the tax they paid. (This cumbersome process was later abandoned after several months of rebates by an equivalent straight-forward rate reduction.) With that issue settled, the legislature passed the budget and it was signed with ceremony —after vetoes totaling $1 billion by the governor— on June 30. The vetoes kept the total budget, i.e., general fund plus special funds, just below $100 billion. Several budget-related bills were signed later including various teacher incentives.

WARNING LIGHT

In 1996, an elaborate electricity plan for California was adopted with bipartisan support in the legislature as well as support by Governor Wilson. The theory was that competition in electricity supply could bring down the costs of power. Generation (power supply) would be separated from distribution. Customers, both residential and commercial, would buy from the cheapest source. Retail prices would be controlled and capped until the former generating/distribution regulated monopoly firms divested themselves of their generation capacity. Despite the appealing theory, there are many practical issues in any deregulation scheme, once the plan moves from general concept to specific details.

Unlike other markets, electricity demand and supply must match exactly, moment by moment. Insufficient supply can cause equipment failures at both the supply and demand ends. So there must always be enough power, something that can only be ensured either by having excess capacity or by quickly cutting off power (blackouts) to some customers. The electricity market can be subject to manipulation unless the deregulation plan includes a new version of regulation to prevent artificial withholding of power and ensure sufficient supply and capacity. As it turned out, California's deregulation plan was flawed and was famously manipulated on the supply side.

Governor Davis was not responsible for the original deregulation plan, since it was signed into law by his predecessor. However, Davis' tendency to micro-manage and his aversion to delegation meant that his administration could overload in a crisis situation. San Diego Gas and Electric was the first major utility to divest itself of its generating capacity and so was free to raise its rates. San Diegans saw their electric bills soar in July 2000, leading to a public outcry. That outcry should have been a warning sign that there were problems with the larger deregulation scheme outside of San Diego.

The solution developed for San Diego ratepayers was a short-term transitional patch whereby rates would rise more gradually through a borrowing arrangement. It did not include a re-evaluation of the entire deregulation plan to see if other problems lay ahead. Various issues competed for Davis' attention in summer 2000 such as creating a César Chavez holiday for the state and deciding how the state would celebrate the 150th anniversary of statehood. There were pressures to enlarge the Cal Grant funds for college tuition and controversy over a possible state law to resolve labor disputes for police and firefighters through an arbitration process.

Also competing for the governor's attention was the aftermath of a scandal that had led to resignation of Insurance Commissioner Charles Quackenbush, a bill related to racial profiling by police, reduction of fees at state parks, political jockeying surrounding various ballot measures destined for the November election, and nursing home regulation. One of these measures would be the ballot proposition that would reduce the voter approval hurdle for school bonds from two thirds to 55 percent.[23] In short, it was easy for the warning light flashed in San Diego on electricity deregulation to be ignored, especially if all important and not-so-important decisions ended up in the governor's office.

And there was so much good news to announce, including a reduction in the sales tax beginning on January 1, 2001, triggered by the state's revenue boom and extra payments to schools for education of the disabled, a matter that had been in litigation for years. The projections for 2001-02 also were rosy, according to the legislative analyst and the Department of Finance. "Extra revenue in the billions," was how the forecast as of November 2000 was characterized by the Department of Finance spokesperson.[24]

However, there also were suggestions that maybe some of the revenue should be spent to shore up the

electricity deregulation scheme which had already caused the San Diego uproar. A spokesperson for Governor Davis said that the governor was pondering the matter but that "it's premature to discuss any specific budget proposal."[25] And a spokesperson for a trade group of electricity producers suggested that the state could better spend its money on public schools, roads, and tax relief. If California were to change its approach to deregulation, the unstable political environment would discourage investment in new power plants, the spokesperson for generating interests argued.[26]

Some forecasters did suggest caution. The UCLA Anderson Forecast in December 2000 indicated that an economic slowdown—but not a full recession—lay ahead. And two of the three big private electrical utilities—Pacific Gas and Electric (PG&E) and Southern California Edison—were straining under the deregulation plan. Because they had not divested all of their power plants by then, they could not raise retail rates. But the wholesale price of electricity had reached a level at which they were operating at a loss, buying high and selling low. At a hearing of the state Public Utilities Commission in late December, PG&E reported that "we are out of credit and we are close to being out of cash."[27] The spectacle of repeated blackouts in California was about to begin.

THE 2001-02 BUDGET PROPOSAL

"Make now mistake: We will regain control over the power that's generated in California and commit it to the public good… Never again will we allow out-of-state generators to threaten to turn off our lights with the flip of a switch."

—Governor Gray Davis
January 2001 State of the State speech[28]

Despite the growing electricity crisis, Governor Davis stuck to his educational theme in framing his budget proposals for 2001-02. Traditionally, word is leaked about key features of the January budget message in advance. For 2001-02, there was to be expansion of teacher training and recruitment, a pay premium for math teachers, and enhanced math education. The academic year would be expanded for middle schoolers. At the higher education level, construction of the new UC-Merced campus was due to start.

Republicans also had plans. Assemblyman Keith Richman (R-Northridge), who was later to be involved in developing Governor Schwarzenegger's ill-fated 2007 universal health plan proposal, suggested expanding children's health insurance coverage. But Republicans more generally wanted tax cuts. Yet despite partisan debate on the budget, electricity could not be ignored.

POWER CORRUPTS

By early January 2001, there was talk of an imminent PG&E bankruptcy which could result in the inability of the company to buy electricity in the deregulated marketplace. (The firm did file bankruptcy in April.) There was also discussion of seizing power plants through eminent domain. And there was talk of the state having authority to turn on power plants ostensibly closed for maintenance. Federal assistance was not forthcoming. Washington, D.C. was by that time in the midst of the transition from Democrat Bill Clinton to GOP President George W. Bush. The new regime was not disposed to offer assistance.

At the same time as electricity was taking the focus away from the budget, there were signs that the dot-com boom was ending and the California economy was weakening. The large general fund reserve that the state had built up was likely to decline according to the legislative analyst, due to those developments.

And with PG&E and Southern California Edison running out of cash to buy electricity, the state stepped in to buy power for them through the Department of Water Resources, effectively reselling it to the utilities and consumers at a loss.

The terms of these newly-negotiated state power contracts were kept secret, officially to obtain the best price. Contract secrecy became yet another matter of controversy. Plans were proposed for a bond issue that would repay the state for its loss-producing power purchases through higher electricity bills in the future. However, there were delays in coming to an agreement on the details of the bond.

At one point, state controller Kathleen Connell—with whom the governor had feuded in the past—refused to transfer state funds for electricity purchases. The governor wanted the bond to be floated quickly so that the draw on the state treasury would end before the beginning of the new fiscal year. Nonetheless, wrangling over the bond and about electricity in general delayed the bond beyond 2000-01.

The Davis administration's position was that the state could afford such electricity purchases in the interim period before a bond was issued, given its budget surplus. Yet as my colleague Werner Hirsch and I pointed out in a February 2001 op ed in the *Los Angeles Times*, the budget was in fact already in deficit. Expenditures were in excess of revenue, a bad position to be in, even apart from the electricity purchases, when the business cycle seemed to be peaking.

A deficit at the peak could only become larger in an economic decline. Davis' finance director responded in a letter to the editor that there was no deficit, despite the figures to the contrary on the Department of Finance's own website.[29] Given a budgetary environment that the legislative analyst termed "one of the most unusual and challenging set of circumstances in recent history," California was moving into a precarious fiscal situation.[30] And despite state intervention in electricity supply, the lights kept going out.

As Table 2 indicates, Davis' approval ratings took a hit during the electricity crisis. Then, as the budget situation deteriorated, his ratings remained low. By early 2003, when his removal from office by the recall became a serious possibility, his ratings essentially had tanked.

THE MAY 2001 REVISE

As the date for the 2001 May revise proposal for 2001-02 approached, it had become clear that the dot-com boom had turned into the dot-com bust. The outlook for continued positive surprises in tax receipts on capital gains had reversed. Now the outlook was for a loss of such revenues and negative surprises.

Memories in Sacramento began to turn to the early 1990s, when a national recession and the end of the Cold War caused a major state budget crisis. Legislative Analyst Elizabeth Hill projected the January budget proposal would produce a negative reserve by the end of 2001-02 unless cuts in it were made. The concerns were not confined to Sacramento, however.

As Table 3 shows, state bond ratings were lowered in April by Standard & Poor's (S&P)—the first of multiple downgrades during the Davis era. Wall Street was watching both the deteriorating economic outlook and the drain on the state treasury from electricity purchases. The electricity bond proposal passed in May. But without a two-thirds urgency vote, the bond sale had to wait 90 days, thus pushing it into 2001-02. In the end, Davis authorized an emergency short-term loan in June—effectively a borrowing against the flotation of the longer-term bond. The state was borrowing against future borrowing.

Table 2: Voter Attitudes Toward Governor Gray Davis

	Voter Approval*	Favor Recall	
Mar. 1999	54%	Apr. 1-6, 2003	46%*
Aug. 1999	59	Jul. 1-13	51**
Oct. 1999	54	Aug. 10-13	58**
Feb. 2000	62	Sep. 3-7	55**
Jun. 2000	61	Sep. 25-28	53**
Aug. 2000	56	Sep. 29-Oct. 1	57**
Jan. 2001	57		
May 2001	36	Actual Election Result	
Sep. 2001	38	Favor Recall	55.4%
Dec. 2001	38	Schwarzenegger	48.6%
Jan. 2002	39	Bustamante	31.5%
Apr. 2002	39	McClintock	13.5%
Jul. 2002	41	Camejo	2.8%
Sep. 2002	39		
Apr. 2003	24		
Jul. 2003	23		
Aug. 2003	22		

*Registered voters.

**Likely voters.

Source: California Field Poll at:
http://field.com/fieldpollonline/subscribers/RLS2081.pdf
http://field.com/fieldpollonline/subscribers/RLS2095.pdf
California Secretary of State at:
http://www.sos.ca.gov/elections/sov/2003_special/recall_question.pdf
http://www.sos.ca.gov/elections/sov/2003_special/gov.pdf

Table 3: California General Obligation Bond Ratings

	Fitch	Moody's	Standard & Poor's
As of Jan. 1999	AA-	Aa3	A+
During 1999			AA- (Aug.)
During 2000	AA (Feb.)	Aa2 (Sep.)	AA (Sep.)
During 2001		*Aa3 (May)* *A1 (Nov.)*	*A+ (Apr.)*
During 2002	*A (Dec.)*		*A (Dec.)*
During 2003	*BBB (Dec.)*	*A2 (Feb.)* *A3 (Aug.)* *Baa1 (Dec.)*	*BBB (Jul.)*

Note: Interim warnings by the rating agencies that may have been issued between rating changes are not included. Downgrades are in italics.

Source: California State Treasurer. Available at: http://www.treasurer.ca.gov/ratings/history.asp

When the May revise did come out, it included various cuts. However, Governor Davis tried to preserve as much of his January education proposals as possible. "I'm not going to let our commitment to education backslide," he said.[31] But in fact the education proposals were trimmed. For example, the proposed lengthening of the middle school academic year was retained, but the number of added days was reduced.

Even with the various May revise spending cuts relative to January, and assuming that the electricity bond would repay the state for its power purchases, the state would still run a deficit and pull down its reserve. As a result, state bond ratings were lowered by Moody's. Republicans criticized the governor's plan as fiscally imprudent. And the legislative analyst warned that even the slimmed down May revise would lead to a negative reserve.

Governor Davis, however, denied that the reserve would go negative. "Reserves are for rainy days… We're getting out our umbrella," he said.[32] By June, state Senator Steve Peace (D-El Cajon)—later to

become Davis' finance director—said the slim reserve projected by the governor's May revise "ain't going to last ten days in a softening economy."[33]

Not surprisingly, the June 15th technical deadline for the legislature to pass a budget came and went without a deal. Cuts were made, however, in various legislative proposals. Lengthening of the middle school year was dropped, for example. A sticking point was the 0.25 cent cut in the sales tax which would end automatically by formula on January 1, 2002 due to revenue declines. Republicans wanted the reduced rate to continue, i.e., to override the existing formula and keep the cut in place. With a legislative stalemate, the new fiscal year began on July 1 without a budget.

NEGOTIATING THE 2001-02 BUDGET

It took until July 26th for a budget deal to be reached and signed into law. Assembly speaker Robert Hertzberg (D-Sherman Oaks) suggested that the Republicans were holding back on a budget deal to "embarrass the governor" by depriving him of an on-time budget.[34] There was discussion of delaying the formula-linked sales tax rise, rather than blocking it entirely as Republicans had wanted.[35] Another possibility was changing the formula in some way. Eventually, enough Republican votes to reach the two-thirds hurdle were obtained in the Assembly by dropping the sales tax issue and offering a deal for rural districts that benefited agriculture and other interests there.

Once a budget had passed the Assembly, it was thought that the process would be easier in the Senate since only one Republican vote was needed. However, various trailer bills linked to the budget in the Assembly failed to obtain sufficient Republican approval, thus delaying the process there.

After a lack of success in the Assembly on the trailer bills, the Senate took up the budget and a new deal was cut in the upper house.

Under the eventual Senate budget plan, the sales tax increase formula was modified but in a way that it would still trigger the 0.25 cent hike on January 1, 2002. In addition, among other inducements, a proposition would be placed on the March 2002 ballot earmarking the sales tax on gasoline (not to be confused with the gas tax itself) for transportation. The Senate's passage of the budget with the ballot measure broke the stalemate in the Assembly over the trailer bills. The governor signed the budget after vetoing about half a billion dollars of spending. Particularly hit by vetoes were community colleges, although some funding was later restored. In theory, a reserve in the general fund of $2.6 billion was forecast for the end of 2001-02. But in fact, a substantial negative reserve resulted.

A series of events delayed flotation of the electricity bond, including the September 11th terrorist attacks - which also made the economic outlook more uncertain. Drops in revenue below forecast levels added to the precarious fiscal climate. By October, the governor told state department heads to plan for major budget cuts. A hiring freeze was ordered. By November, Davis was calling for mid-year spending cuts and freezing various funds over which he had control.

Borrowing to deal with state deficits was raised as a short-term solution to what was now acknowledged as a budget crisis. There began to be discussion of having the state issue Revenue Anticipation Warrants" (RAWs), that would allow borrowing across the fiscal years, i.e., from 2001-02 to 2002-03, particularly since the electricity bond was on indefinite hold at the Public Utilities Commission. Another possibility that began to be discussed was borrowing against future tobacco settlement revenue.

Given the budget and electricity meltdowns, various Republican candidates for governor in the November 2002 election began to surface, as Davis looked more and more vulnerable to a challenge. Included on the list were Los Angeles Mayor Richard Riordan, Secretary of State Bill Jones, and businessman William Simon, Jr.[36] All of the candidates pointed to California's fiscal problems and attributed them to Davis' lack of prudence. "Spending like a drunken sailor," was Riordan's description.[37] Riordan was widely viewed as the most effective opponent in a race against Davis. But he was also seen as someone who might have trouble—because of his centrism—in winning a Republican primary.

BUDGETING FOR 2002-03 IN AN ELECTION YEAR

"With the same resolve we demonstrated during the energy crisis, we will squarely confront the current economic downturn and its consequences."

—Governor Gray Davis
2002 State of the State address38

With revenues adversely affected by recession, the need to conserve cash became an element in budgeting. State Treasurer Phil Angelides proposed a restructuring of state debt so that debt service would be more back-loaded, i.e., that outflows for debt service would be delayed. Potentially complicating state budgeting was the above-mentioned ballot proposition (Prop 42) that was scheduled to appear on the March 2002 ballot as part of the earlier budget deal for 2001-02. Prop 42 earmarked the sales tax on gasoline for transportation rather than the general fund and when put to the electorate passed by a wide margin.

Despite the revenue problem, the governor did not propose new taxes in his January budget proposal. But various fees were to increase. The proposal acknowledged that a deficit would in fact be occurring during the current (2001-02) fiscal year but assumed nonetheless that 2002-03 would end with a slight positive reserve. However, some of that reserve would consist of borrowed tobacco money and of borrowings from other sources including delayed payments to state pension plans.

The January budget plan assumed various funding would flow from the federal government that in fact might not be forthcoming. And the legislative analyst suggested that required payments to K-14 education under Prop 98 were underestimated in the Davis proposal. By late February, she also estimated that his revenue forecasts were significantly overoptimistic. The only good news was that California's electricity usage was constrained by the state's economic slump, making it unlikely that a renewed period of blackouts would occur.

PRIMARY EVENTS

Republican gubernatorial hopeful William Simon characterized the Davis budget as "shell games and fuzzy math."[39] Foreshadowing a favorite proposal of Arnold Schwarzenegger when he became governor, Simon pushed for a large rainy-day fund to cushion the state budget from economic downturns. Senate president John Burton, while officially favoring Davis' re-election, managed to be photographed hugging Republican Richard Riordan and made various off-handed criticisms of the governor. And as bad revenue news accumulated, the governor had to scrap his teacher bonus program as part of midyear budget cuts.

It is not unknown for incumbent California governors seeking re-election to try and influence the selection of the other party in the hopes of facing a weaker opponent.

However, such cross-party efforts can be risky. Governor Pat Brown, seeking a third term in 1966, thought Ronald Reagan was his preferred opponent on the assumption that a movie actor would not be considered by voters as a serious candidate. As it turned out, Reagan was a strong contender and defeated Brown. Intervention in the other party's primary, in short, can lead to unintended results.

Nevertheless, Gray Davis thought that Riordan, as a centrist candidate, would be his strongest rival among the Republicans and ran TV ads to undermine him. Ostensibly, the ads criticized Riordan as a flip-flopper on the abortion issue. However, the ads were intended to emphasize that Riordan, although a Catholic, was taking a pro-choice position. Davis was undoubtedly right about Riordan being the strongest candidate in 2002 and his strategy did help Simon beat Riordan in the March primary. (Jones came in third.) However, Davis' intervention in a Republican primary was remembered in the 2003 recall as a political manipulation to the governor's ultimate detriment.

PRELUDE TO A SUMMER STALEMATE

Given the squeeze on state revenue, various public-sector unions pushed for a tax increase. However, in an election year, Governor Davis was reluctant to endorse such a strategy. In addition, a tax increase would require a two-thirds vote in the legislature—an unlikely outcome. But by April, Davis was discussing the possibility—as something he didn't want to do but could not rule out—of suspending Prop 98's guaranteed funding for K-14. "I don't want to go there right now," the governor said.[40] There was also talk of delaying the opening of UC-Merced.

Still, the state was likely to run short of cash absent some solution. Part of the problem was that the electricity bond had not yet been floated and it was unclear when it could be issued. Controller Kathleen Connell announced there would need to be an issuance of Revenue Anticipation Warrants (RAWs), short-term borrowing that crosses the fiscal year. By the May revise, the governor was proposing to undo past cuts in the Vehicle License Fee (car tax) for a one-year period—although delayed until after the November election. A tobacco tax would be part of the package. And there would be cuts in Medi-Cal and other programs.

Legislative Democrats pushed for increased income tax rates in the higher brackets, but Republican support was not available for such a tax hike. However, the Senate, which required only one Republican vote to obtain the needed two thirds, did pass a budget with a jump in the car tax for one year, a tobacco tax, and other revenue raisers. The one Republican who provided the vote—Senator Maurice Johannsen (R-Redding)—was subsequently excluded from Republican caucus meetings in early July. The deal with him reportedly involved not closing a private prison in his district and other considerations.[41] In the Assembly, however, four Republican votes were necessary and no budget was passed when fiscal 2002-03 began on July 1.

A LONG HOT SUMMER OF DELAY

In the background of the stalemate were the impending gubernatorial and other elections in November. William Simon was having trouble in fundraising and there was controversy over his unwillingness to release his tax returns. And Governor Davis had a scandal simmering about state computer contracting with Oracle Corp. The California state auditor also criticized inefficiencies in the management

of state prisons. As the heat of the campaign increased, the duration of the budget delay also increased. Eventually, the state was to go over two months without a budget, a record not to be exceeded again until the summer of 2008 under Governor Schwarzenegger.

The new fiscal year began with the usual warnings that certain payments could not be made without an enacted budget, and with conflict between Governor Davis and Controller Connell over what payments would be made. A legislative analyst's report suggested that if the current trajectory of revenues and spending were continued, the state would face deficits over a multiyear period, i.e., that economic growth alone was not expected to repair the problem.

As the budget stalemate persisted, Governor Davis' popularity with voters was certainly not enhanced. However, Republican gubernatorial opponent Simon seemed to be having difficulties convincing prospective voters that he would do a better job than Davis or even in raising funds to support a campaign to tell them so. There were reports that Simon was under an IRS investigation concerning his income taxes and a tax shelter he had used of uncertain validity. But he continued to refuse to make his returns public, saying he would do so only if elected. As pressure mounted on the issue, Simon eventually allowed reporters to see the returns, but not to copy them.

On the other hand, a Field poll suggested that Prop 49 scheduled for the November 2002 enjoyed strong public support.[42] Prop 49 earmarked funding for after-school activities and was supported by actor Arnold Schwarzenegger. Schwarzenegger was interested in possibly running for governor in some future election. His political advisors had suggested sponsoring a ballot initiative to introduce him to the public as a serious figure. At the time, no recall was envisioned so the earliest Schwarzenegger could have been contemplating a run for the governorship was 2006. But Schwarzenegger wasn't shy about his ambitions. "That is my favorite job in a political arena. Being CEO of a state—that, to me, is interesting."[43]

By August, although various proposals on the budget were debated in the legislature – including a major increase in the tobacco tax - none seemed close to breaking the stalemate. Without a budget, state employees were still receiving their full pay although a legal challenge to paying them more than the minimum wage had been mounted. Various other providers of state services were not being paid at all and Cal Grant scholarships were also delayed. Republicans charged that Davis was "alarmingly disengaged" from the budget process.[44]

In late August, Assembly Republicans and Democrats seemed to be moving towards a deal. It involved certain changes in business taxes that would bring in more revenue in the short term (although less in the future), various spending cuts, and some cosmetic deferrals of expenditures into the next fiscal year. But the deal also involved a possible ballot proposition that would earmark a portion of the general fund for infrastructure improvements. In the end, agreement was reached in the Assembly, but without the infrastructure proposition. The Assembly version of the budget was then passed by the Senate.

In signing the budget in early September 2002, Davis called the process of negotiations "an arduous and difficult task." Gubernatorial rival Simon charged that the new budget was "a fabrication that was neither balanced nor fiscally responsible."[45] However, by that time Simon was looking increasingly to be a likely loser in November, albeit with Davis seen by voters as being only the less bad of a poor choice.

THE 2002 GENERAL ELECTION

Davis refused to attend a debate in mid-September, leaving Simon to debate the Green Party candidate. (Both major party candidates did debate in October.) He vetoed a bill that would have allowed illegal immigrants to obtain drivers' licenses, even though the bill might have attracted some Latino voters. (The license issue arose again in the 2003 recall when Davis signed a similar bill, hoping to attract Latino votes). A Simon TV ad purported to show a photo of Davis accepting a campaign check inside a state office, an act which would have been illegal. But it turned out that the location was in a private home and therefore legal, a revelation that ended up casting a negative light on Simon rather than Davis.

On Election Day, Davis won 47 percent to Simon's 42 percent (with the remainder going to third parties). Such a narrow winning margin was not a good showing for an incumbent—especially one who had spent roughly twice as much on his campaign as his particularly weak opponent. The apparent voter unhappiness of 2002 would ultimately be reflected in the 2003 recall.[46] Of more immediate significance to the budget was a very narrow victory by Democrat Steve Westly over Republican state senator Tom McClintock for controller. The conservative McClintock, had he won, might well have refused to float the Revenue Anticipation Warrants (RAWs) that were needed by the time of the next budget. (For odd reasons, RAWs are floated by the controller rather than the Treasurer.) In the official tally, the two controller candidates were separated by less than 17,000 votes.

The Schwarzenegger-backed Prop 49 earmarking funds for after-school activities, in contrast, was adopted by a margin of over one million votes. Just as Simon was not seen as a viable vehicle for addressing voter concerns about the budget, so—too—were some Democratic legislative candidates. Democrats lost two seats in the Assembly and one in the Senate, thus making it more difficult for them in future budget or tax debates to obtain the needed two-thirds majority.

On the other hand, the election led to internal feuding within the GOP. State Republican chair Shawn Steel complained that big business had engaged in a "betrayal" of the party by underfunding Simon and McClintock. Steel vowed the GOP would no longer support tax breaks for large corporations.[47]

It was soon apparent after the election —if it had not been before—that the 2002-03 budget was in fact in deficit and that more fiscal difficulties lay ahead. "There is no easy way out of this predicament," the legislative analyst said in mid-November.[48] Governor Davis called a special session of the legislature in December to deal with the unraveling budget and recommended midyear spending cuts and layoffs. Student fees were raised at UC and CSU campuses. The resignation of finance director Tim Gage was announced with the explanation that he needed to spend more time with his family. And the state's credit rating was cut by Standard & Poor's and by Fitch.

The election—while a win for Davis—also turned him into a lame duck due to term limits. Davis' lack of close relations with other elected Democrats surfaced even before the election when Lieutenant Governor Cruz Bustamante, running for his own re-election, raised the Oracle computer contracting scandal in a TV ad. In the post-election period, Bustamante—who became the *de facto* Democratic alternative in the 2003 recall—said of Davis, "I'm not his yes man."[49]

After the election, various politicos had a meeting with the editorial board of the *Sacramento Bee*. Davis' campaign advisor Gary South chastised Republican state senator Jim Brulte at the meeting over the lack of viable GOP candidates for office at the statewide level.

"You have no candidates. Now, I know what

you're going to do; you're going to get somebody, oh, Schwarzenegger, he's rich, he's famous, he's got a wife who's a Kennedy… (But) running an initiative campaign like Proposition 49 is not even in the same ballpark as running for governor… He might think it is… But it's not."[50]

DAVIS' FINAL BUDGET: 2003-04

"I'm greatly honored to be able to lead California for the next four years. There's no question I've been tested by adversity, but I'm stronger and tougher and more determined to do a good job."

—Governor Gray Davis
interviewed in early January 2003[51]

Unlike what was possible at the beginning of his first term, Governor Davis could not promise major new gains in education as his fifth year and second term in office commenced. There was talk about obtaining additional support from the federal government, protecting homeland security (post 9-11), and creating jobs by releasing previously-authorized bond funds for infrastructure. In his State of the State address, the governor asked for more authority to make midyear budget cuts, a proposal which Republican legislators supported but to which Senate President John Burton responded with "not in my lifetime."[52] Davis vowed to reject any budget that did not contain structural reform (the precise nature of which was not spelled out).

When his January budget proposal was released for 2003-04, it contained proposals for income tax, sales tax, and tobacco tax increases. Senate minority leader Jim Brulte, however, quickly declared that he was "not going to vote for a tax increase."[53] A new wrinkle in the proposed tax plan was that the revenue would be shifted down to counties—framed as fiscal "realignment"—along with responsibilities for various state services. By pushing revenue and programs down to the local level, the proposal avoided Prop 98's requirement that new state revenue—such as would accrue under the governor's tax increase proposal—be partly earmarked for K-14 education. Despite the budget squeeze, an expansion of Healthy Families was proposed, i.e., covering more working poor children with public health insurance. But there were cuts in other social welfare programs. Additional but uncertain revenue from Indian gaming was projected. The governor suggested the Regents should invest UC pension funds in home construction to create jobs and affordable housing—a suggestion that went nowhere.

One proposal that Davis did not make at the time, but that was already percolating in Sacramento, was triggering a hike in the Vehicle License Fee (car tax). When the car tax had been cut earlier—taking money away from local governments which the state then backfilled—a trigger provision had been included. The trigger would raise the tax back up if there were insufficient state funds for the backfill. In the prior year, Davis had proposed raising the car tax but his proposal then was not accepted in the earlier budget deal.

It was unclear exactly who would pull the trigger or exactly how a determination of insufficient funds would be made. Later in 2003, however, as the recall loomed, the car tax trigger became a major campaign issue. But in January, the governor made a point of explicitly opposing any increase in the car tax or even enacting a bill that would clarify the trigger. However, there was pressure from local governments to hike the car tax. Jerry Brown, then mayor of Oakland, suggested that Davis "with the stroke of a pen" could raise the car tax so that "we can restore vital police services."[54]

For local governments, the issue wasn't the car tax *per se* but that the governor was proposing that the state stop paying the backfill while not raising the tax. It appeared that Davis—realizing that the car tax was a major issue for Republicans—was resisting the

possibility of such an increase. He may have hoped to have a car tax increase as fiscal bargaining chip later in the process. Or he may have hoped that by siding with the Republicans at this stage of the process he might make them more cooperative later.

But keeping the car tax off the table proved difficult. Legislative Analyst Elizabeth Hill criticized the governor for depriving local governments of the backfill. "The state made a policy decision to give tax relief (when the car tax was cut), and we think that the same entity of government that makes the decision about tax relief should bear that burden."[55]

By late January, the Assembly had proposed a bill that would make midyear spending cuts in 2002-03, but effectively linked the cuts to Davis pulling the car tax trigger. Davis indicated he would veto such a bill, saying he wanted a "total budget solution" instead.[56] However, he did not rule out the possibility that the trigger would eventually be pulled under existing law if the budget problem worsened. Eventually, the governor and the controller produced a legal opinion that the car tax increase could be triggered by an opinion of the finance director. With that opinion on the record, the legislature then approved some midyear spending cuts.

AN ENDANGERED GOVERNOR?

Both the legislative analyst and legislative Republicans argued that Davis' proposal for a midyear correction of 2002-03 and for the coming 2003-04 had overstated the problem, perhaps to dramatize the real dilemma and pressure the legislature. The new finance director —former state senator Steve Peace—attributed alternative projections to a "green eyeshade debate" over methodology.57 The controversy centered around estimates of the so-called "workload" projections, i.e., what would happen if no budget changes were made. If the projection is exaggerated, but offset by equivalent cuts in spending, the budget predicament is made more dramatic, possibly influencing legislative cooperation. There is no *net* effect on the projected outcome, but the large gross dollar magnitude might jar the legislature into going along.

Another part of the problem was the time dimension. Multiyear projections are routinely compared with the one-year general fund budget, thus producing a large and shocking comparative number. This apples-and-oranges approach—multiyear vs. one year —may simply confuse the process of fiscal decision-making. It is certainly questionable whether sowing confusion produces legislative cooperation or better eventual results.

Davis was not the first governor to use the apples-and-oranges approach to budget presentation approach nor, as it turned out under Schwarzenegger, the last. Nonetheless, the debate over the size and presentation of the fiscal problem created a credibility issue for the governor. Lack of any obvious budget agreement in February led Moody's to join the other two rating agencies in downgrading California bonds, the first of three such downgrades by that agency during calendar 2003.

At about the time the car tax veto was becoming the focus in Sacramento, recall papers were served on the governor, charging him with "gross mismanagement of California Finances."[58] Initially, the threat of a recall was not taken very seriously by the Davis administration. Serving such papers is merely the first step in the recall process, allowing a voters' petition to be circulated.

Two prior recalls against Davis had been in fact been served by groups angry over immigration and about electricity, but those efforts had dissipated. Recalls had also been filed against all earlier governors going back to the mid-1930s, except for two, without success.[59]

"This is the sort of thing that they do all the time," said Gary South, a Davis political advisor.[60] News of the 2003 recall being served when it first surfaced did not even make the front page of the *Sacramento Bee*, although it was reported on an interior page.

By mid-February, however, the possibility of a recall began to taken more seriously, although Davis reportedly told state attorney general Bill Lockyer as late as May that the recall would not qualify.[61] While the link back of the recall to some Republicans was apparent, Davis was also vulnerable because of limited allies within his own party.[62] Early on, however, Republican legislative leaders were leery of endorsing the recall. Groups such as the California Business Roundtable opposed a recall as late as June.

Anyone—including a Democrat—could run for governor if a recall made it on to the ballot so the result might be substituting one Democrat for another. A new Democrat would not be termed out in 2006 and might prove to be more popular than Davis. In the early stages of the recall, key Democrats eschewed any ambitions to run. But, of course, they could always reverse course (as Lieutenant Governor Cruz Bustamante ultimately did). Assembly minority leader Dave Cox initially opposed the recall; "There's a difference between being incompetent and corrupt," he said.[63] Nonetheless, the threat of a recall gave traditional Democratic allies some leverage over the governor on budgetary matters.

The president of the California Teachers Association (CTA) pointedly noted, when asked about the recall, that "Gray Davis is not popular with the CTA, or teachers."[64] The CTA tended to be affiliated with Democrats but could be pragmatic about choosing allies. CTA had in fact supported Arnold Schwarzenegger's Prop 49 the previous November which won voter approval. Prop 49 earmarked funding for after-school (and therefore school-related) activities. And CTA was anxious to defend Prop 98's school funding guarantees as the budget situation deteriorated. Moreover, it was considering filing still another initiative earmarking a tax increase for education.

Other public sector unions had potential gripes with the governor. As part of collective bargaining proposals made by the Davis administration in March 2003, came a suggestion for furloughs—unpaid involuntary days of leave—a device used in the 2008-09 budget crisis. Some state unions with contracts already in effect were asked to reopen them for concessions. As might be expected, there was little union enthusiasm for such proposals.

When an elected official is served with a recall, he or she can provide a response before the petition is authorized for circulation. Governor Davis, rather than ignore the effort (one option for such an official), chose to argue that the recall was the product of sore losers in the 2002 election and of right-wingers who were blaming him for a national recession. His response became part of the material petition circulators would have to include in future signature gathering. It eventually became part of the official voter pamphlet when the recall appeared on the ballot.

It was unclear until late April whether the recall proponents would have sufficient resources to mount a credible petition drive. Up to that point, they did not have the substantial resources needed to pay for gathering the required signatures. Although there was talk of using the Internet to circumvent the need to hire sufficient paid signature gatherers, it appeared unlikely that a spontaneous uprising via the Internet could succeed. However, Congressman Darrell Issa (R-Vista), who had become independently wealthy in the car alarm business, decided to contribute to the recall campaign in the hopes of becoming governor.

Issa turned out to be a more serious gubernatorial candidate in his own mind than in the voters'. Despite his success in the car alarm business, he had in his youth

been arrested for car theft, although the charges were dropped. More recently, in sensitive the post 9-11 period, he had charged that airline officials had kept him off a plane to Saudi Arabia due to racial profiling of his Middle Eastern background. The airline in question said he had simply arrived for the flight too late. These controversies dogged his abortive campaign.

But once serious financing had entered the campaign via Issa, it became a real threat to Davis and began to color the budget process.[65] More and more attention had to be devoted to the recall in an administration which insisted on gubernatorial attention to everything. As Republican legislators were pulled towards support of the recall, they had less incentive to produce an on-time budget or otherwise cooperate with the governor. Arnold Schwarzenegger began to loom as a threat in a possible recall, even before he formally announced his candidacy. At a dinner celebrating the 25th anniversary of Prop 13 in June, Schwarzenegger quipped, "I just forgot our state governor's name, but I know that you will help me recall him."[66]

THE BORROWING SOLUTION

Since Republicans were rejecting a tax increase – but were not willing to specify a cuts-only package to resolve the budget dilemma—they needed an alternative plan. Essentially, the only way out for them was to propose to borrow, a "rollover of a deficit" as Senate minority leader Jim Brulte termed it.[67] Such an approach had been used by Republican Governor Pete Wilson during the budget crisis of the early 1990s.

When the borrowing option fully surfaced, Davis initially was reluctant to consider it and termed the Republican plan as based on "fuzzy math.[68] Nevertheless, the borrowing idea steadily crept into the debate. There were already proposals on the table to sell state bonds in order to cover state public pension obligations. Borrowing for a specific expense within the budget is not much different in concept from borrowing for general expenses. But it was thought that such a bond would avoid the constitutional requirement that voters approve general obligation debt increases.

Adding to the pressure to come up with new borrowing was the fact that borrowing that had already been built into the current year's budget in the form of a tobacco settlement bond. But in April that bond was indefinitely delayed. There were concerns at that point that cigarette maker Philip Morris might be forced into bankruptcy due to a pending lawsuit. Such a bankruptcy would make a debt security that was dependent on tobacco company revenue difficult to float.

Moreover, an important element of the January budget —realignment, i.e., pushing revenue and programs to the local government level—was called into question by the Legislative Counsel. A purpose of realignment, as noted earlier, was to reduce state education obligations under Prop 98, which would otherwise accrue under the governor's tax increase proposal. In short, the more that alternatives to general borrowing of the type the Republicans were proposing were stymied, the more attractive their rollover borrowing appeared, simply by default.

Davis' own Department of Finance began to flirt with the rollover idea in early May, shortly before the May Revise, although the governor indicated that he was still "not prepared to say" whether or not he supported the idea.[69] Ultimately, however, rollover became part of the governor's approach. And the idea was inherited and adopted by Davis' successor, Arnold Schwarzenegger, after the recall election.

THE MAY 2003 REVISE

When the May Revise for 2003-04 was released, it had largely dropped the realignment approach, probably because of the legal uncertainty over whether it would avoid Prop 98's claim on any added state revenue. Governor Davis included a rollover element as proposed by the Republicans, but continued to include various tax increases including a half-cent hike in the state sales tax. Given the two-thirds requirement needed for tax increases or for the budget more generally, however, it was unclear how Davis expected his new proposal to fly. Davis did assume that the car tax would be increased by the trigger mechanism, something not requiring a two-thirds vote in his view.

The legislative analyst provided a cautious note, but indicated that, *if* everything went exactly as planned, the governor's rollover plan could work. However, any borrowing plan would have to persuade Wall Street to finance the rollover. Wall Street was already being asked for a short-term loan in the form of Revenue Anticipation Warrants (RAWs), which were secured in mid-June.

A budget stalemate beyond July 1 would create investor doubts over a more extensive rollover. And the rollover plan—if it entailed long-term borrowing—would have to deal with the constitutional requirements that general obligation borrowing must be for specific projects—not normal operations—and must be approved by a vote of the people. An attorney with the conservative Pacific Legal Foundation pointed to the constitutional issue in an op ed, probably intended as a warning that the Foundation would likely file a legal challenge to any borrowing plan it considered unconstitutional.[70]

Not surprisingly, given the growing magnitude of the budget problem and the complicating fact of the recall movement, there was no budget agreement at the end of June. And the legislature remained polarized. Two moderates, Republican assemblyman Keith Richman (Northridge) and Democratic assemblyman Joe Canciamilla (Pittsburg), tried to put together a compromise budget. But they ended up isolated from their more partisan legislative colleagues.

Adding to the turmoil was an opinion of the Legislative Counsel that the car tax trigger could not in fact be pulled, since it was based on the state having "insufficient" funds for the backfill. Her view was that if there was *any* money left in the general fund sufficient to cover the backfill, the tax could not be automatically raised. That opinion gave support to Republicans who threatened a court challenge to a hike in the car tax. Meanwhile, the fact that RAWs had been floated in June would keep the state in cash well into the summer—reducing the incentive to come to a quick budget compromise.

STALEMATE AND CIRCUS

Once the state began its fiscal year without a budget, the usual forces were set in motion. State controller Steve Westly warned that certain payments could not be made absent a budget. Moreover, a recent court decision would lead to state workers being paid only the minimum wage, he indicated, with the rest of their pay held up until a budget was enacted. The gridlock on the budget occurred despite the fact that by the time the new fiscal year began, the governor and both parties in the legislature were in favor of a rollover borrowing plan, pegged at $10.7 billion. However, Republicans did not want to impose a tax increase to pay off the loan; Democrats wanted an earmarked tax hike tied to it.

Early in the new fiscal year, the recall moved from a possibility to a near-certainty. On July 7, recall organizers announced that they had collected enough signatures to force an election and that the secretary of state Kevin Shelley would be receiving the petitions shortly. Although a Democrat, Shelley was anxious to be viewed as acting impartially and efficiently, perhaps with a future career goal in mind. And he generally was so perceived in handling the recall's mechanics. Shelley's goal, however, meant that Davis could not hope the recall would somehow be delayed or derailed because a Democrat was the state's chief election officer. (Ironically, like Davis, but a year and a half later, Shelley's political career also came to a sudden halt when he resigned in the midst of a campaign funding scandal.)

Even though the recall campaign had officially ended once the signatures were gathered, Darrell Issa continued to air anti-Davis ads on the radio, now focused on his own candidacy for governor should Davis be ousted. Yet Issa's opinion poll results put him behind other Republican possibilities. Various lawsuits were filed to block the recall, but in the end—despite some legal obstacles—it was certified and plans for the election went forward. The date of the election was set by the Lieutenant Governor as October 7. Even before a budget was ultimately signed, voters were bending toward the recall option.

By the third week in July, there was both a focus on the budget and various distractions apart from the recall, all of which created a chaotic atmosphere. Big student fee increases were approved for UC and CSU in anticipation of whatever budget was ultimately approved. Some Democrats were proposing to ask the state Supreme Court to overturn the two-thirds budget and tax rules, citing a vaguely-related case in Nevada. An initiative, defeated in 2004, was also circulating aimed at cutting the two-thirds hurdle to 55 percent.[71] Another initiative, which would outlaw the state's keeping racial statistical records, was likely to end up on the recall election ballot, assuming the recall occurred. It became Prop 54. In addition, there would be a ballot proposition (Prop 53) earmarking a portion of the general fund for infrastructure, a leftover from the budget deal for 2002-03. (Props 53 and 54 were defeated in the special recall election.)

Davis' finance director Steve Peace attracted unwanted media attention by screaming "We need a budget" at a Republican assemblyman and was reportedly in tears at the time. He also denounced some Democrats who had inadvertently strategized about the budget near an open microphone as "a group of fringe Democrats having a goofy conversation."[72] When the recall was officially certified on July 23, Davis said he was going to fight it "like a Bengal tiger."[73] A recall organizer characterized the atmosphere in Sacramento: "Set up a tent; the circus will come."[74] Standard & Poor's cut its rating of California bonds to BBB.

BUDGET DEAL

Announcement of the recall certification seemed to expedite legislative budget negotiations. On July 24, an outline of a deal was reported, although a final version was not sent to the governor until July 29. It contained a rollover but—in a partial victory for Republicans—without a tax increase. Their victory was partial because a business tax credit was eliminated and various fees were increased. Nevertheless, the ultimate package contained more cuts than Democrats had wanted and the deal tilted toward the Republican side. The opening of the new UC-Merced campus was delayed. Governor Davis signed the budget on August 2, despite his earlier pledge not to sign any budget that failed to contain structural reform. He vetoed less than $1 million of spending.

An elaborate, and legally questionable, strategy was developed as part of the budget accord to enable a rollover bond flotation. A half-cent of the sales tax

normally going to local governments would be cut. The state would raise its part of the sales tax by half a cent and semi-earmark that revenue to pay off the bond. An equivalent amount of property tax would be taken from school districts and used to compensate local governments for their half cent loss. The state would then reimburse the school districts for their loss of property tax revenue that had been given to the locals. This three-step approach—known as the "triple flip"—allowed sales tax earmarking without a sales tax net hike. By itself, however, it did not resolve the constitutional issues of floating bonds for general operations and without a vote of the people.

After the recall, when Governor Schwarzenegger adopted the rollover approach from Davis, he retained the triple flip—which had the inadvertent effect of making future state expenditures contingent on the ups and downs of local property tax receipts. But Schwarzenegger dealt with the constitutional issues by putting the matter to the voters in the form of Props 57 and 58 of 2004. He also raised the level of the bond authorization well above Davis' $10.7 billion which gave him a future cushion of borrowing ability should another fiscal crisis arise.

In contrast with Schwarzenegger's later rollover, Davis' version sought to avoid the constitutional constraints by creating an entity outside the general fund. The legislature would use the entity to repay the bond by appropriating money annually to service the debt, technically on a discretionary basis. The uncertain legal argument was that since the legislature formally did not *have* to appropriate the funds (the half-cent revenue), the bond did not represent constitutional "debt." It is unlikely that such an approach could have succeeded since a court challenge to the constitutionality of the bond would have scared off potential investors. That is, even if the elaborate scheme was eventually found constitutional, the uncertainty posed by litigation in real time would likely have killed it as a practical matter.

THE BUDGET BECOMES A LEGACY

"I have to stay focused. Believe me, I do not like (the recall). But that and a dollar will get me a cup of coffee."
—Governor Gray Davis[75]

"The public doesn't care about figures. They have heard figures for the last five years. Figures and drafts and percentages. And all kinds of things. What people want to hear is are you willing to make the changes? Are you tough enough to go in there and provide leadership"?
—Recall candidate Arnold Schwarzenegger[76]

Once a budget was signed, increased public attention was drawn to the recall. In a recall election, voters first indicate whether they favor or oppose recalling the official involved. Then, regardless of their personal vote on the recall question itself, they choose among competing candidates (other than the targeted official). If the recall succeeds, the candidate with the most votes takes the office and the targeted official is removed; there is no runoff. It is possible, therefore, for just under 50% of the voters to oppose the recall and for some candidate with well under 50% to be elected as the replacement. As Table 2 shows, in the end, the recall passed with 55.4% of the vote and Schwarzenegger received a respectable 48.6%, well ahead of any rivals.

Organized labor largely backed Governor Davis in opposing the recall effort. Funds were allocated to tie up signature gathering firms recall proponents might use by paying them to circulate a petition—of no legal significance—in support of Davis. The Democratic strategy of not fielding a candidate soon eroded and Lieutenant Governor Cruz Bustamante ultimately put his name on the ballot after U.S. Senator Diane Feinstein made it clear she would not run. (Insurance Commissioner John Garamendi announced he would run but then reversed himself and left the Democratic field to Bustamante.)

The Democratic strategy became “no” on the recall but (just in case it succeeded anyway), “yes” on Bustamante. Congressman Darrell Issa, who had funded the recall campaign, tearfully dropped out and Arnold Schwarzenegger dropped in. Schwarzenegger announced his candidacy on the *Tonight Show*, and appointing former Governor Pete Wilson as his campaign co-chair.

When Schwarzenegger became a candidate, Richard Riordan—whose campaign a year for the Republican nomination had been undermined by Davis—bowed out as a potential candidate. William Simon—the Republicans’ losing gubernatorial candidate in 2002—was in the recall race for a time, but also bowed out eventually as did Peter Ueberroth. Ueberroth was well known in Los Angeles for successfully supervising the 1984 Olympics. But his leadership of Rebuild L.A., an organization set up after the Los Angeles Riot of 1992, was not the success his Olympic efforts were.

Conservative state senator Tom McClintock was the only significant Republican left—other than Schwarzenegger—for voters to choose by the time of the recall election. Although McClintock was arguably the most knowledgeable about the state budget, he never proposed an overall plan for fixing it. But he did propose zeroing out the car tax—not just undoing Davis’ car tax increase—and imposing a spending cap on the state.

Independent columnist Arianna Huffington entered the campaign but eventually dropped out towards the end. Her campaign centered on ridding state government of “special interests.” She argued for shifting toward higher corporation taxes and higher taxes on commercial property—a position that would require modification of Prop 13—but favored undoing Davis’ car tax increase. In an era when use of the Internet for political campaigns was still developing, her website included amusing animated cartoons.

Green Party candidate Peter Camejo focused on tax increases on the wealthy and reducing fees at UC and CSU. As did Huffington, he favored raising taxes on commercial property. Because of the ease of getting on the recall ballot, well over 100 minor candidates were listed, some apparently running for the fun of it and others to attract publicity.

Democrat Bustamante, who ultimately came in second in the recall, promised to reduce the car tax and substitute taxes on higher-income individuals and on tobacco. If the legislature would not approve his “tough love” budget program, he suggested he could go directly to the voters through a ballot proposition to implement his plan.[77] Schwarzenegger did not propose a detailed fiscal plan. But did say that he would undo Davis’ car tax increase and that he would propose a constitutional spending cap, a concept he raised repeatedly—and without success—during his two terms in office.

Schwarzenegger quickly distanced himself from economic advisor and famous financier Warren Buffett who criticized Prop 13’s effect on property taxes. And he promised there would be no new taxes, except in emergencies. He was dogged by allegations of sexual harassment and made various apologies for past behavior during the later days of the campaign.

However, Schwarzenegger generally characterized himself as a practical centrist who favored abortion rights—despite his Catholic background—and gun control. As a wealthy businessman, he would not need support of special interests, Schwarzenegger argued. But his definitions of special interests seemed confined to unions and Indian gaming tribes. Other commercial interests did contribute to his campaign and continued to do so during his governorship. Schwarzenegger promised to institute an “audit” of the state government to uncover inefficiencies.

Governor Davis had to take stands on the various bills crossing his desk during the recall campaign. He signed a bill allow drivers' licenses for illegal immigrants although he had vetoed a similar bill in the past. Opponents charged that the governor was desperately seeking Latino votes. (And the legislature quickly repealed the license law after Schwarzenegger took office.)

Davis signed a hastily-drafted employer-mandated health insurance plan (which voters subsequently repealed in a 2004 referendum). Republicans charged that the Davis administration was signing off on state union contracts without obtaining sufficient pay concessions. Meanwhile, a court decision blocked sale of a pension bond without a vote of the people. And Davis' rollover bond mechanism was challenged in court—as expected—by the Pacific Legal Foundation on constitutional grounds.

Anything that suggested the budget was not yet under control was unfavorable for Davis. Moreover, the unpopular car tax hike went into effect October 1, only a few days before the October 7 recall election. After the recall succeeded and Schwarzenegger took office, the first official action he took was repealing the car tax hike. Although as governor he periodically defended that action, it immediately worsened the budget situation he inherited. And the car tax repeal continued to be an issue into the next budget crisis of 2008-09, when the car tax was again raised. But on the night he won office in the recall, Governor-elect Schwarzenegger promised the voters that "I will not fail you, I will not disappoint you, and I will not let you down."[78]

FAST FORWARD: THE BUDGET CRISIS OF 2008-09 AND BEYOND

"Our elected officials in Sacramento are facing a budget crisis unseen in this state since the Great Depression, and it was entirely avoidable… California's future is in danger."

—Candidate Arnold Schwarzenegger during the 2003 recall campaign[79]

"It's abundantly clear that just because you change governors you don't change the financial condition of the state."

—Former Governor Gray Davis commenting on the 2009 budget crisis[80]

On taking office, Arnold Schwarzenegger was in many respects the complete opposite of Gray Davis. He was ebullient, optimistic, and—of course — a celebrity, not someone initially elected, as Davis was, with a reputation as a competent, professional public administrator. But Schwarzenegger could be unfocused with too many goals, albeit popular goals.

Davis came into office focused on education. He retained that emphasis as long as the budget was flush. However, Davis' tendency to micromanage produced a variant of lack of focus—since it is impossible to handle everything once difficulties are encountered. Thus, early warning symptoms of the electricity crisis were missed. And the evolving budget crisis of the early 2000s eventually overwhelmed everything else, despite early denials by the governor's finance director that anything was amiss.

A RENEWED BUDGET CRISIS

The budget crisis of the early 2000s was clearly the major factor in the recall of Davis and Schwarzenegger's election as his replacement in 2003. Initially, because he inherited that crisis, Schwarzenegger *did* focus on fiscal affairs, putting the Davis borrowing plan into effect but doing so through clearly legal means. Schwarzenegger used his initial popularity to win voter approval of the needed (one-time) constitutional changes in 2004 under Propositions 57 and 58 to permit the borrowing. But the new governor took to feuding with the legislature the following year, putting a series of initiatives before the voters in 2005 as part of his "Year of Reform." Only one of these propositions was directly linked to the budget. And all failed at the ballot box while the governor's popularity plummeted.[81]

Part of the problem in 2005 was that during Schwarzenegger's campaign for the two 2004 borrowing propositions, he oversold what they could accomplish to the public. Voters were assured that the two measures would solve the state's fiscal problem and that afterwards the state would be able to "throw away the credit card." Instead, the state lived off the reserve that resulted from 2004 borrowings, aided by the improved economy, until 2007.

After the stinging rebuff he suffered the Year of Reform campaign of 2005, and with the 2006 gubernatorial election coming up, Schwarzenegger switched to promotion of the construction state infrastructure—to be financed by more borrowing. A seemingly no-cost expansion of infrastructure appealed to the electorate and the governor was re-elected by a strong margin. In 2007, the gubernatorial theme became adoption of a state universal health care program, promoted as self-supporting, but in fact with some budget risks.[82] However, Schwarzenegger's attention in 2007 was also on environmental issues, hydrogen highways, and greenhouse gases. That agenda won him international acclaim and even an invitation to address the United Nations. But neither the state budget nor proposals for state health care could be passed at the UN.

In the end, the health plan failed—in part due to wandering gubernatorial attention. There was only a narrow window of opportunity to pass a potentially-costly health plan before renewed budget pressures became apparent. And the window had closed by the time a full plan was readied for legislative action in late 2007. The plan was passed in the Assembly but rebuffed in the Senate as too risky to enact in the face of a deteriorating fiscal situation.

By 2008, a renewed California state budget crisis was well underway.[83] Continued fiscal deterioration led to a budget stalemate— and no budget—during the summer of 2008. During that summer, Governor Schwarzenegger dropped his opposition to a tax increase and advocated one. Ultimately, the stalemate lasted two and a half months, exceeding even the two-month record delay set under Davis. Moreover, the new budget, enacted in mid-September 2008 without the governor's proposed tax increase, quickly unraveled. GOP opposition to Schwarzenegger's tax prescription blocked the tax proposal he initially made.

A midyear revision of the 2008-09 budget was enacted in February 2009, this time raising taxes as well as cutting expenditures. The February deal also included an early budget for 2009-10. However, the enacted budget was partly dependent on a series of budget propositions that voters largely rejected in May 2009. That rejection and continued economic deterioration led to new negotiations for a revised budget for 2009-10.

California began the new fiscal year (2009-10) with the old February budget still in place. In contrast to prior years, when there was no budget on July 1, the state was authorized to spend. But it lacked the cash to pay

for all the authorized programs. By early July, the state controller began issuing registered warrants (IOUs) instead of cash for some payments. A budget revision deal reached in late July ostensibly fixed the renewed fiscal problem. It involved real cuts but much *de facto* and overt borrowing, questionable expected sales of state assets, and dubious savings and forecasts. One Democratic advisor rationalized the outcome on the grounds that it was necessary to "distinguish between the best possible solution and the best solution possible."[84] But the fear was that there had been no fundamental solution.

In particular, the new deal seemed unlikely to produce a positive or even zero reserve, given further economic decline. Litigation was threatened by local governments as the state dipped into their treasuries. Not all elements of the ostensible solution passed. The prison budget was to be cut in the face of legally-questionable inmate overcrowding but the specifics of how a reduced prisoner population was to be accomplished was left to be determined. In effect, the legislature dared a federal court to make the reductions. Although the Obama administration was trying studiously to avert its gaze from California's fiscal drama, the possibility (or hope) remained that there would eventually be federal assistance of some type.

SIMILAR RESULTS

We started with the obvious question of whether leadership matters in California. As outlined below, Gray Davis and Arnold Schwarzenegger had very different types of personalities, backgrounds, and leadership styles. Yet the Schwarzenegger budget crisis of 2008-09 seemed similar to the Davis crisis of the early 2000s. Voters had apparently thought that by recalling Davis and replacing him with Schwarzenegger, they would resolve the state's budget woes. The man on the white horse would ride in and defeat the bad guys in Sacramento, whoever they were. Despite this expectation, by 2009, the nation was treated to pundits pointing to California as ungovernable. Metaphors of sinking ships and cars running off cliffs were common as were references to failed states and third-world countries.

The fact that different governors ended with similar results suggests a structural interpretation. But typically, the structures to which reference is made are institutional in a political sense. The usual suspects are Proposition 13, the two-thirds vote requirements for new taxes and budget enactment, term limits, voter mandated spending and spending formulas, gerrymandered legislative districts, and polarized political parties. And so the remedies suggested generally revolve around political solutions such as new corrective initiatives or even a constitutional convention.

AN UNDERLYING REALITY

Despite the tendency to focus on them, political institutions are not created exogenously. There may well be a more fundamental economic reality beneath those institutions. Going back to gold rush days, California generally grew faster than the rest of the U.S. But California became an elderly state in the late 19th and early 20th centuries, along the lines of Florida today. People came from the cold Midwest to retire in the sunshine, or at least to live out their days in a warm climate. With many folks thinking about the hereafter, the state produced religious innovations, quack remedies, and invented the commercial cemetery. It also produced wacky "pensionite" movements that cemented the state's image as a place where oddities were the norm.

But at the same time, the nice weather had attracted movie making and airplane manufacture in the south in the early twentieth century. And in the Bay Area,

two guys named Hewlett and Packard were tinkering with electronic equipment in a garage in the late 1930s. With the impetus of World War II, which brought a veritable population explosion to the California to work in military production, California became a youth culture. After the War, returning GIs came back to stay. And after a pause, military needs of the Cold War, augmented by the hot Korean and Vietnam Wars, kept federal money flowing to the state's aerospace industry.

California continued to experience rapid growth compared with the U.S. as a whole. Land and housing was cheap. Suburbs could be built on low-cost farm land. The growth provided tax revenues to expand freeways and water projects, to fund a highly regarded K-12 educational system, and to create new public colleges and universities. By the mid-1960s, California became the largest state in the nation.

Growth comes at a cost, however, particularly in the face of heightened environmental sensitivities. Concerns arose about air and water pollution, congestion, and the quality of life for those already in California. Whereas Governor Pat Brown in the 1960s is remembered for infrastructure expansion, his son Jerry Brown was elected governor in 1974 touting "an era of limits." As population growth pressed against land and housing supply, property values rose. So did property tax assessments and bills, leading to Prop 13. Various "slow growth" movements followed, limiting new development. A major water project was rejected by voters in the early 1980s.

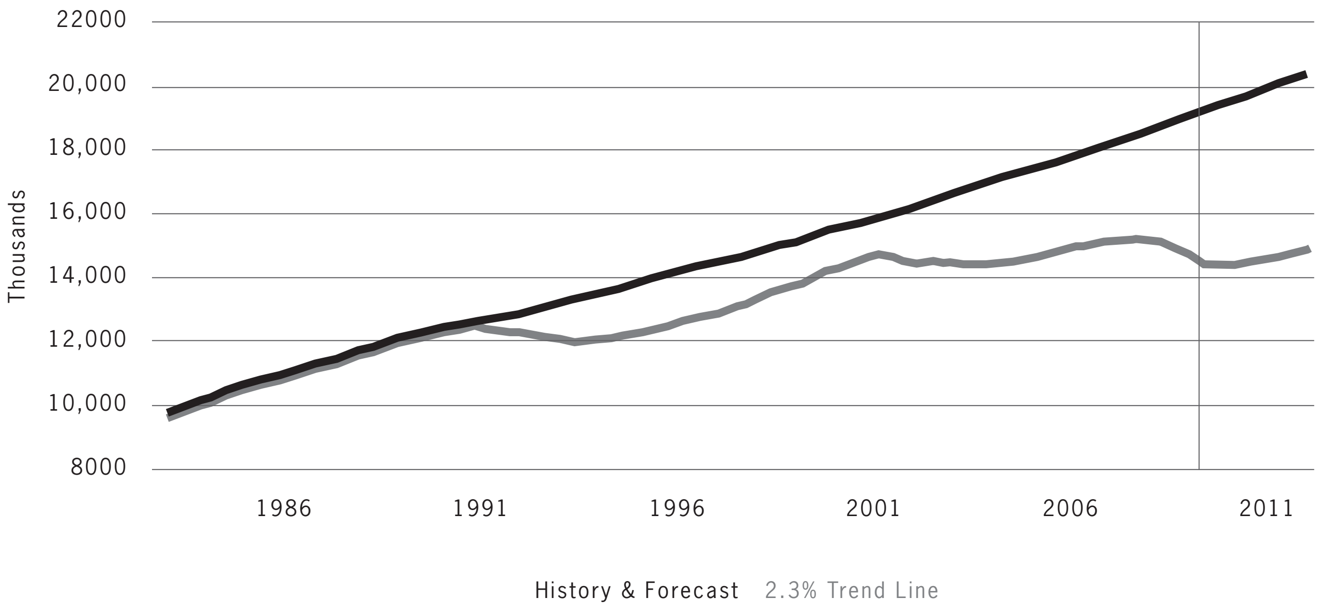
California experienced a budget crisis in the early 1980s. However, that period was also the era of President Reagan's "evil empire" which gave a new fillip to aerospace activity and temporarily masked the underlying shift. The budget crisis was eventually resolved under Governor George Deukmejian when growth resumed.[85] But by the end of the 1980s, the Soviet Union was dissolving and aerospace in California was substantially downsized, removing a base of high-wage jobs from the state. Immigration —reflecting developments in Mexico and others parts of the world—brought in new job-seekers, but biased toward the low-wage end of the scale.

A new downturn and budget crisis was left by Deukmejian to his successor, Governor Pete Wilson, first elected in 1990. Wilson wrestled with a budget crisis for much of his initial term.[86] And he often focused on illegal immigration as fiscal burden for the state. Much of his successful re-election campaign in 1994 centered on the immigration issue and on Prop 187, an initiative aimed at barring use of public services by illegal immigrants.

As Chart 3 shows, California never really recovered from the recession of the early 1990s. The problem that had developed by the late 1970s finally became apparent once the growth accompanying the end-stage of Cold War military spending was removed. Relative to the old trend, job growth in the state lagged, even during recovery and even during the dot-com boom and the later housing boom. California, in short, has been enmeshed in a decades-long process of converting from a state characterized by supernormal growth to a more average state.

Voter expectations about public services have lagged in recognizing this underlying shift. In the context of direct democracy, the result is a string of uncoordinated actions by initiative which mandate spending and weaken the legislature. While voters tend to see the governor as a kind of CEO who can fix the resulting fiscal strains, a weakened legislature inherently weakens the governor. Ultimately, it is the legislature that has to act on budgets and other state programs.

Chart 3: California Nonfarm Employment History & Forecast Vs. 2.3 % Trend from 1990:3



Source: UCLA Anderson Forecast (June 2009).

A ROLE FOR LEADERSHIP

Some governors have pointed to underlying causes but not the whole picture. As noted, Jerry Brown's "era of limits" suggested the rising cost of growth and a structural shift. But when it came to the major political consequence of the shift, Prop 13, Brown was either distracted or bemused and—in the end— flip-flopped from opposition to the proposition before it passed to support afterwards.[87] Deukmejian took the taxpayer revolt as a given and the last gasp of the Cold War helped pull the California economy back on track. In any case, he had little incentive to look for an underlying shift that was being temporarily obscured.

Wilson looked at the demographic element as an underlying cause of California's budgetary problems and ultimately did navigate the state out of the budget crisis of the early 1990s. But his preferred remedy, in effect state control of immigration via Prop 187, was doomed to fail since immigration control is the province of the federal government. Subsequent litigation largely voided Prop 187.

Finally, neither Gray Davis nor Arnold Schwarzenegger focused on underlying trends. Davis came into office during the dot-com boom when, despite the employment lag shown on Chart 3, the budget position of the state was temporarily strong. Ultimately, Davis viewed his fate as a function of the short-term business cycle. "Nobody seems to understand that the economy is like the tide," he complained. "When you're in high tide no one thinks low tide is coming."[88]

Schwarzenegger tended to point to the political symptoms of the underlying shift. His suggested political reforms, such as a larger rainy-day fund, would help at the margin. But his communications skills were never pointed toward acquainting the public with the difficulties the underlying economic shift entailed and the implications for public policy. Probably, his natural tendency toward optimism made it difficult to contemplate the idea that California had become a normal state in terms of its growth potential.

The Bad News is that California's virtuous circle of growth leading to revenue to supply the infrastructure for more growth began coming to an end in the 1970s. The state's size help obscure that reality. California politicians often point to the fact that if the state were a country, it would be the 6th or 7th largest in the world. But apart from electoral votes, size doesn't matter.

The Good News is that being average is not a terrible fate—if only California could find a leader to make the challenges of the transition explicit. Perhaps voters now realize that expecting a man (or a woman) on a white horse to fix the state's fiscal problem is unrealistic. The question is whether whoever emerges from the 2010 gubernatorial election will be willing to acquaint voters with the idea of California as a normal state.

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2 Quoted in Dan Smith. "For Davis, dream comes alive today." *Sacramento Bee*, January 4, 1999.

3 The narrative in the material that follows is taken mainly from press information, mainly the *Sacramento Bee*. Footnote references are confined mainly to direct quotes.

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5 Available at http://www.californiagovernors.ca.gov/h/documents/inaugural_37.html.

6 James Glassman and Kevin A. Hassett. 1999. *DOW 36,000: The new strategy for profiting from the coming rise in the stock market*. New York: Times Business.

7 Davis inherited a lawsuit challenging the almost-complete voiding of Prop 187 by a court. Bustamante wanted Davis to drop Wilson's appeal. Davis followed a strategy of agreeing to "mediation" of the dispute – which essentially would result in the state agreeing to accept the court decision.

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25 Phil Troustine quoted in Steven A. Capp, “Senator seeks $2 billion to stabilize power rates.” *Sacramento Bee*, November 21, 2000.

26 See Steven A. Capp, “Senator seeks $2 billion to stabilize power rates.” *Sacramento Bee*, November 21, 2000.

27 Roger Peters quoted in Carrie Peyton. “PUC weighs power hikes – Hearing starts with utility pleas.” *Sacramento Bee*, December 28, 2000.

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8

CALIFORNIA'S VOLATILE TAXES: HEALING A SELF-INFLICTED WOUND

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Those who think California lacks seasons miss the well-defined season of discord in Sacramento's halls of government. The drama of the fiscal budget season is made all the more complex and interesting by its reliance on revenue estimates; estimates which are at best a moving target. Revenue "shortfalls" for the combined 2008-09 and 2009-10 fiscal years were described at times as $12 billion, as $40 billion dollars and as $60 billion.[1] This was a huge margin of error when one considers that the 2007 fiscal year general fund was $103 billion. Regardless of the forecast one uses the adjustments in spending, borrowing and taxation are huge.

How does it happen that the state has been faced with budget adjustments of this size on four different occasions this decade? It stretches credulity to lay the blame solely on irresponsible spending. Rather, spending is typically multi-year and implicit in the approval of spending is a forecast of revenues sufficient to sustain that spending.[2] The systemic volatility in California's revenues make these revenue forecasts unreliable.

In this chapter, the source of that systemic problem is analyzed. One solution to alleviate volatility in California tax revenues is proposed. The solution proposed is clearly not the only route to less volatility, but rather a vehicle to demonstrate what must be done if California is to avoid a continuation of the repetitive severe revenue shortfalls of the 2000s decade and earlier.

REPETITIVE CRISES, PROP 13, AND GOVERNMENT SPENDING

The crisis of the late 2000s had a familiar ring to it. Steven Hayward of the *National Review* called it California's "once-a-decade crisis" (although there were in fact two crises in the 2000s).[3] Citing the budget problems of Governors Reagan, Wilson and especially Davis, he points to the current crisis as a particular home-grown California malady. Much has been made of the spending side of the equation and, indeed, California's 2/3 majority requirement for approval of budgets, legislation by referendum, and locked-in expenditures. These components of state budgeting create friction in the system which makes spending and taxation changes all the more challenging.

Robert Wassmer's 2006 study of the recurrent crises concluded that Proposition 13 of 1978 has made the problem one of expenditure management by Sacramento. By sharply cutting local property taxes, Prop 13 forced a reliance on a pro-cyclical state revenue stream.[4] Dan Walters of the *Sacramento Bee* stated "whether the state's fiscal problem is too much spending or too little revenue, of course, is much like beauty or art, largely dependent on the eye of the beholder."[5] But there is more to it than just that.

EXPENDITURES

The expenditure side is a political decision. Californians through their legislators, governor, and ballot propositions make explicit decisions on what to spend state revenues. While dictated somewhat by the health of the economy, an analysis of this side of the equation is more a study in political science than economics. The revenue side also has a political element: defining the structure through which revenues will be raised. But once defined, the amount of revenues is not in the direct control of the political structure.

There is, of course, no clear answer as to whether or not there is sufficient energy in California for reform. Only time will tell if the body politic is ready to force fundamental change. But we can better understand what the issues are, and how they affect the prospects for future crises in Sacramento.

REVENUES

The most important issue is on the revenue side. If revenue streams grew at a known constant rate each year, it is unlikely that there would be the kind of chaos seen during the crises of the 2000s. Such a Pollyanna world would not eliminate all of the problems as the executive and legislature branches of government would still have conflicts over their own priorities and with voter initiative priorities. And there would still be an inconsistency between the time horizons of state business and those of political careers. But without the wide swings in revenue engendered by the existing tax system, California would not have the fiscal disasters it regularly develops.

PROPOSITION 13

As noted, it is common blame fiscal swings on Prop 13. Indeed there are a number of studies of California's fiscal problem which assume that a discrete break in the pattern of fiscal affairs occurred in 1978 with the passage of Prop 13.[6] "If only property taxes could have risen, we would have had more revenue than we have today," is a common refrain. Of course, states

with higher property taxes have other taxes which are lower, so this conclusion does not necessarily follow. Although property taxes in California are lower than average for U.S. states, they are not much lower.

Prop 13's restrictions on property assessments and tax rates should not be confused with property tax revenues. Suppose we were to assume that Prop 13 restrictions on property tax assessments and property tax rates did not exist and that California's general fund were supported entirely by property tax receipts (although property taxes are in fact local). Then revenue would have fallen by 29% from its peak in fiscal year 2006 to fiscal year 2009 compared to the 17% decline in actual revenue experienced.[7]

Although there is some truth in the view that property taxes are a tool which, under certain circumstances, could be used to stabilize the state budget, they are clearly not the source of the volatility problem. As will be shown, the volatility of tax revenues is, as Gamage suggests, traceable to California's income tax. But the relationship is more subtle than he finds and—as it turns out—it is not a construct of Prop. 13.[8]

VOLATILITY AND RELIANCE ON DIFFERENT TAX BASES

The National Conference of State Legislatures prepares a study of forecast impending budget "shortfalls" (that is, projected shortfalls if nothing were to be done) for each state each year.[9] California is in the unenviable position of making the top-10 list more often than other states. These projected shortfalls result in the budget crises we continually experience, but shortfalls are simply the difference between projected revenues and projected expenditures. In that sense, they are not real data. They are guidelines for the budget process which are based upon forecast assumptions by state governors, legislatures and independent revenue boards.

Moreover as events change, so do the estimated shortfalls. The underlying phenomena these shortfall estimates are trying to capture are actual expenditures and revenues. Each will be affected by decisions made by state government based upon projected shortfalls.

Revenues could be greater due to new taxes and expenditures could be less due to spending cuts. Nevertheless, the volatility of the underlying data, particularly with respect to tax revenue, ought to characterize the shortfall/budget adjustment process. If actual tax revenue were growing at a constant rate, and therefore not volatile, one would not expect budget crises to appear. Similarly, if underlying tax revenue is highly volatile, one would expect to see either expenditure smoothing over time or recurrent budget crises.

The total volatility of general fund tax revenue is given by the sum of the volatility of each of the taxes that make up the general revenue adjusted for the co-variation of the taxes. If a state hypothetically relied on three taxes—sales, income, and property—mathematically this could be represented as:

Variance(general fund) = Variance(Income Tax) + Variance(Sales Taxes)
+ Variance(Property Taxes) + 2xCovariance(Income Tax and Sales Tax)
+ 2xCovariance(Income Tax and Property Tax)
+ 2xCovariance(Sales Tax and Property Tax)

Fluctuations in general fund revenues from Income Taxes, Property Taxes and Sales Taxes are normally positively correlated and thus the Covariance terms add to the variability. So, it is not just the reliance on a particular tax that matters. The structure of the tax can induce more or less variability than the inherent variability of the underlying tax source. Prop 13 broke

the link between economic conditions and property assessments and lowered the overall variability of California's local property tax collections.

TAX STRUCTURE

The tax structure of California can be compared to other states using the data from the U.S. Bureau of the Census and shown in Figures 1-5.[10] These data are consistent in definition across states, although revenue categories are not exactly the same as used by the California Department of Finance. Although the California's shortfalls are blamed by some on Proposition 13, an examination of state reliance on property taxes shows that most states do not utilize property taxes as a source of revenue.

PROPERTY TAX

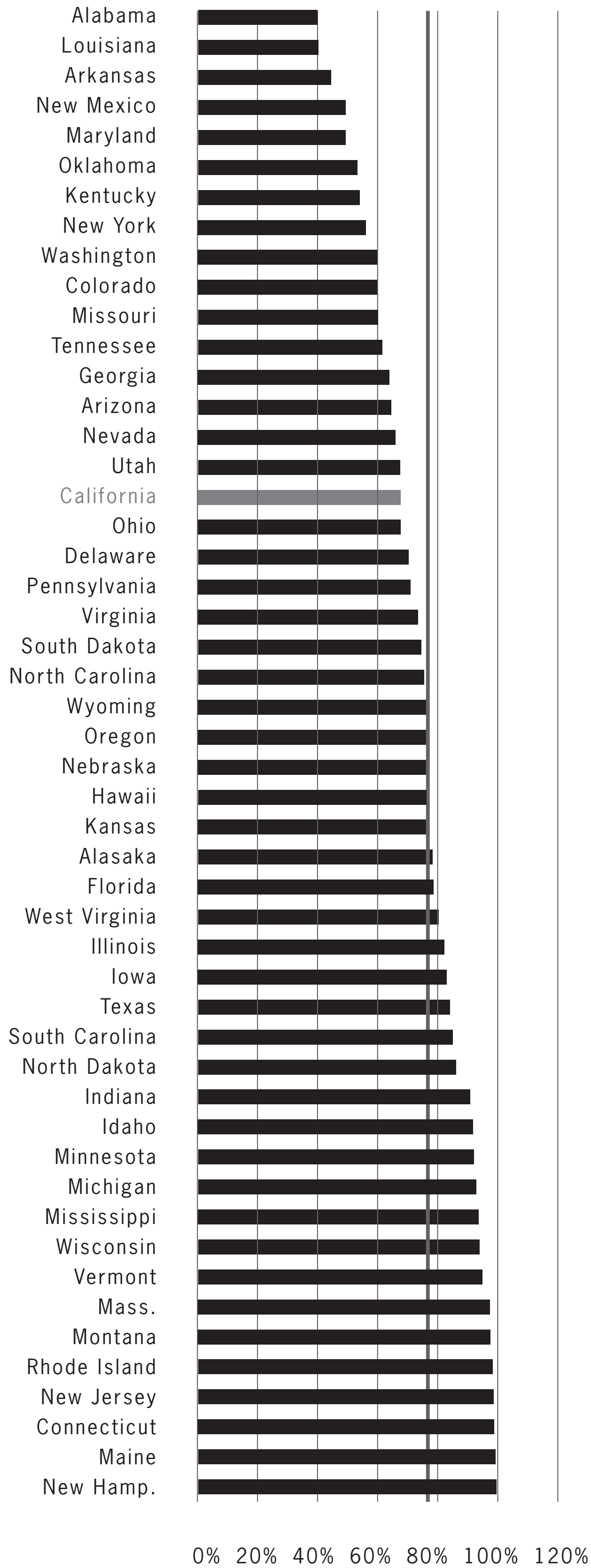
California, like most states, does not have a state property tax per se. There are certain levies which flow through the state government, but they are not revenue sources for state expenditures. These are included in the Census data and incorporated here for completeness. (It appears that the so-called "car tax," a kind of property tax on motor vehicles, is treated in these data as California state revenue, although the state remits the proceeds to local governments.) As can be seen from Figure 1, for all but a handful of states, property taxes are insignificant.[11]

One could argue, correctly, that state finance and local finance are difficult to separate. What happens in local government finance affects the state budget indirectly even if there is no direct linkage. Looking at property taxes across the country, we find that local governments typically rely on property taxes for the majority of their revenue. California's property tax reliance is lower than the national average, but not by much, although about 2/3rds of the states rely more heavily than California for local government revenue on property taxes. If the state government makes transfers to the local governments in lieu of property taxes, then while the state does not rely on property taxes for its own revenue generation, property tax revenues could still have an important impact on the state budget. And, in fact, California is in the top-10 states when it comes to transfers to local governments. In the years immediately following Prop 13's passage, California ran deficits in part to pick up the slack in local government revenues with increased state transfers.[12]

But, California is the only one of the top-10 states to appear in either the fiscal 2008/2009 or the fiscal 2009/2010 National Conference of State Legislator's fiscal stress list. Indeed the *Los Angeles Times* reported that local governments were finding that by not moving assessments each year with the swings in the current market value of properties, Proposition 13 has been a stabilizing factor in property tax generation.[13] So, from the revenue side, California's budget woes are not about Prop 13.

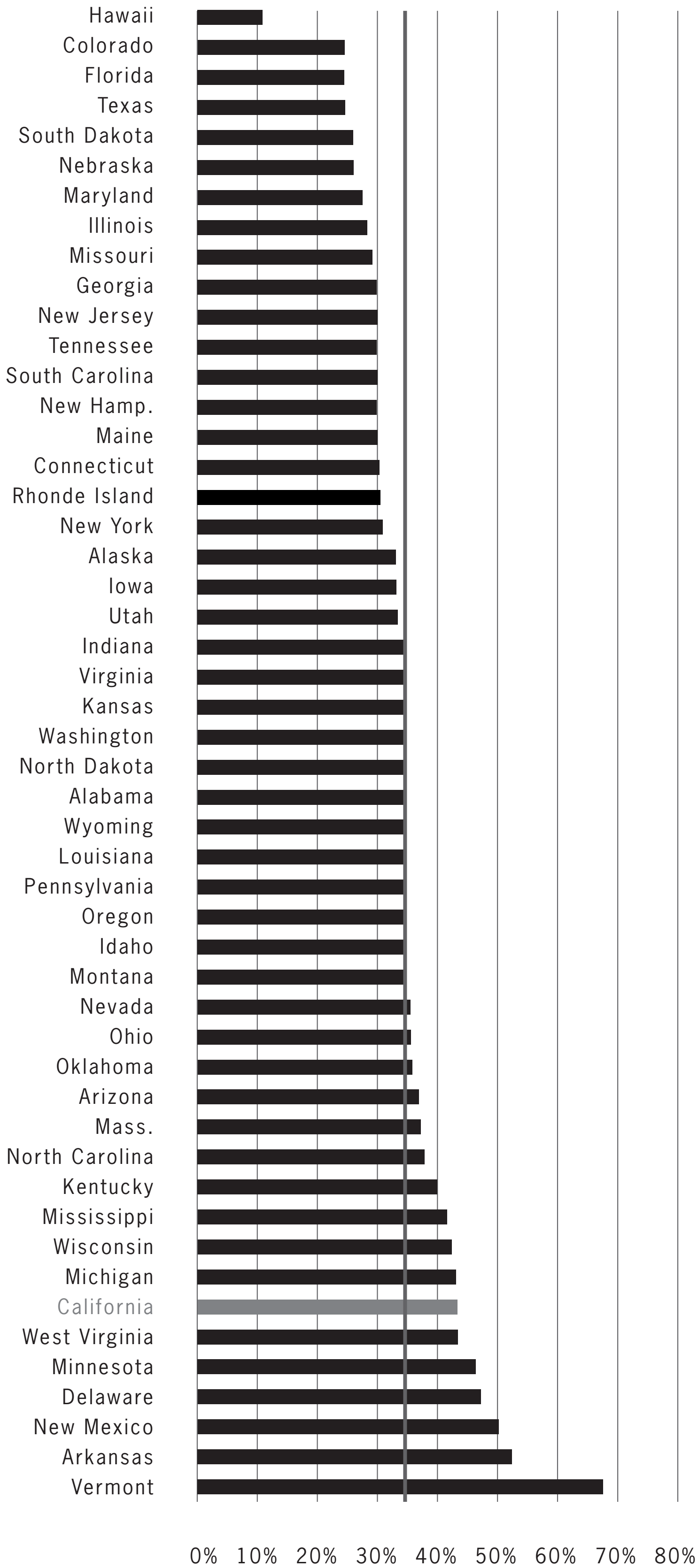
Figure 1. State Gov't % of Tax Revenues From Property Tax, 2006

Figure 2. Local Gov't % of Tax Revenues From Property Tax, 2006



Source: U.S. Department of Census

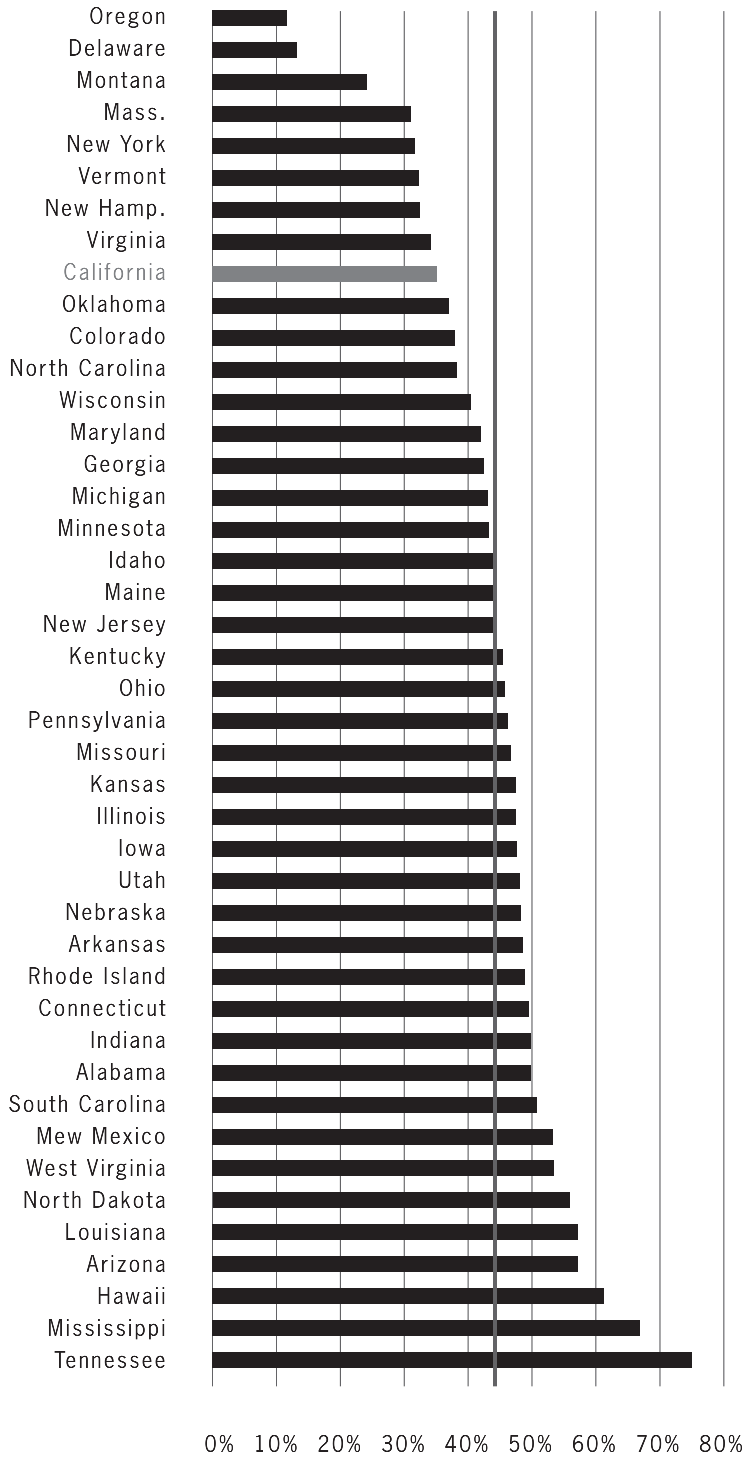
Figure 3. Local Gov't % of General Revenue From State Transfers, 2006



SALES AND INCOME TAXES

There are two other important taxes to examine as potential sources of recurrent revenue problems in California: sales and use taxes and income taxes. Sales and use taxes are a major source of revenue for many states. This tax tends to be volatile because it relies heavily on consumer durables such as automobiles, home improvements, and home construction. While the sales tax in California is a major source of revenue, accounting for about 35% of state tax receipts, California is in the bottom quintile of states relying on this revenue source. So the answer to California's recurrent budget crises does not seem to lie in sales and use taxes. If this were the problem, then the state would not be continually making the top-10 list for states with fiscal stress.

Figure 4. Reliance of State Revenue on Sales and Use Tax % of Total

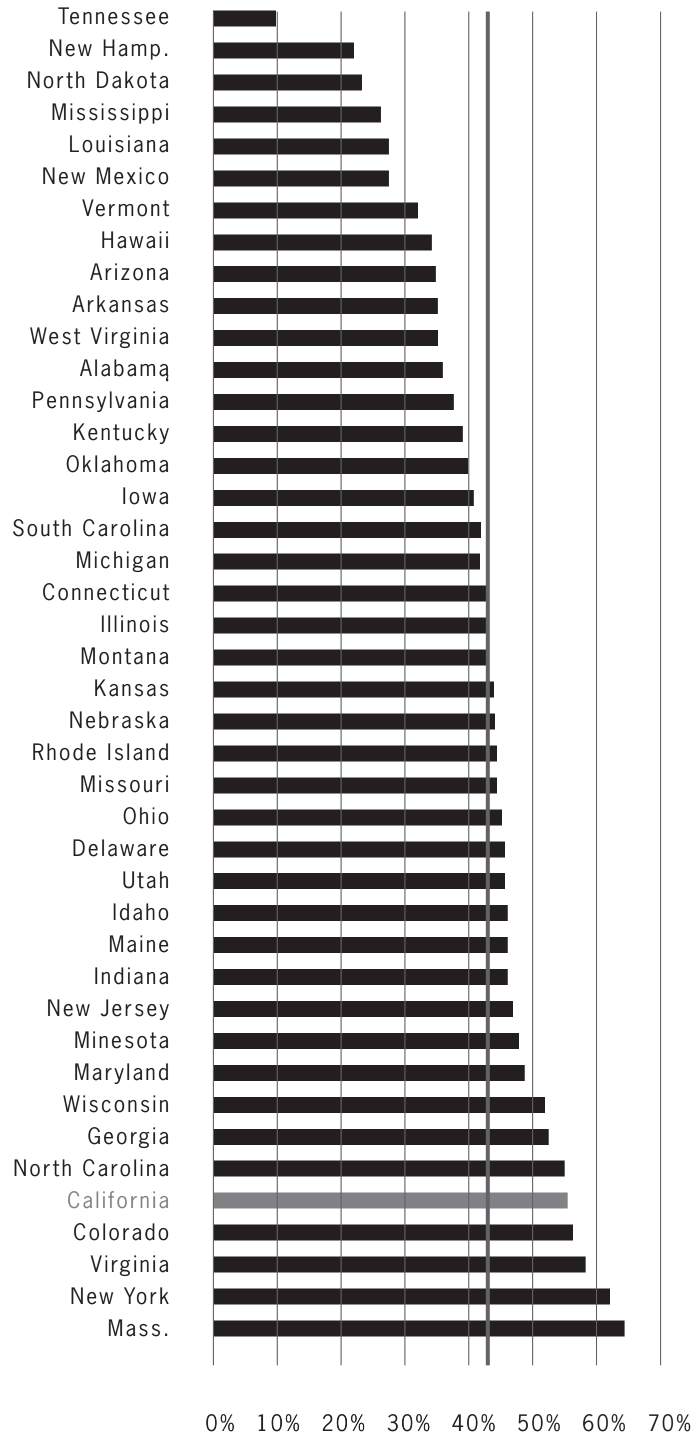


Source: U.S. Department of Census

The last tax we want to examine for volatility is the income tax. In general, state income taxes are more variable and less predictable than other taxes.[14] California relies heavily on income taxes for its revenue generation, fifth in the nation. In the top-10 states measured by reliance on income tax about half appeared once on the stress list for either fiscal 2008 or fiscal 2009. The correlation is not perfect, but there is at least some indication that reliance on income taxes might be causal to swings in tax revenues.

We should note that there are quite a few states on the stress list which have average or less-than-average reliance on income taxes as well. This fact just points out the difficulty of ferreting out California's atypical shortfall situation. State tax revenue structures not only differ widely from each other and over time, and so does the character of their tax base.

Figure 5. Reliance of State Revenues on Income Tax % of Total



VOLATILITY AND INCOME TAX STRUCTURE

To explore the volatility issue further, we want to consider five factors for each state: 1) the variability of income, 2) the extent to which each state relies on income taxes, 3) the progressivity of the income tax, 4) the highest income tax bracket, and 5) the variability of general fund tax revenue. Consider the top-10 states as measured by the variability of the state's inflation-adjusted personal income over the period 1990-2006. The top-10 states divide into two categories (except Hawaii); extractive industry states (Texas, Oklahoma, Louisiana, Colorado and Nevada) and innovation, knowledge, technology, and finance-driven states (Massachusetts, Connecticut, New York, and California). Texas and Nevada do not have income taxes and, hence, the volatility of income is not directly reflected in general fund revenue.

Figure 6 illustrates the results of the analysis. Spheres on the chart represent the variability of taxes. The larger the sphere the more variable is total tax revenue. The horizontal axis reflects the reliance on income taxes.

It is interesting to note that even among the states with the highest variability of income, the variability of taxes is unrelated to the reliance on income taxes for revenue generation. Moving from less reliance to more reliance (left to right on Figure 6), one sees that the size of the spheres does not change in any regular way. New York, for example, has a small sphere though it relies on income taxes for more than 60% of its total tax revenue. Louisiana, in contrast, has a large sphere and relies on income taxes for less than 30% of its total tax revenue.

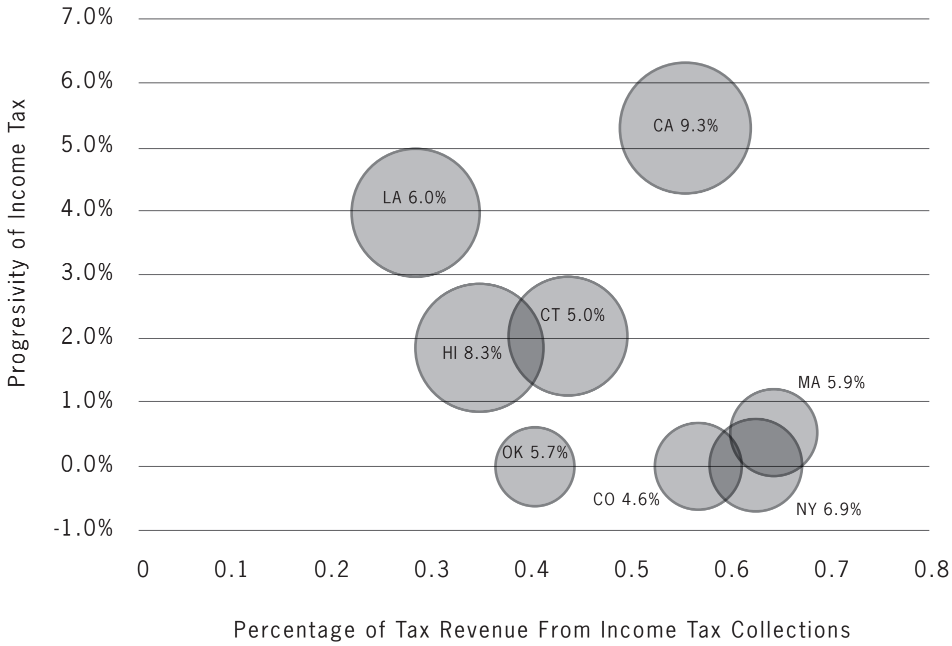
The vertical axis of Figure 6 is the progressivity of the tax system measured by the difference in the marginal tax rate of the highest income tax bracket less the marginal tax rate for those earning $10,000 of taxable income per year. California has the highest degree of progressivity in its income tax at just under 6%.[15] Going from lower progressivity to higher progressivity, we see a pattern emerging. Although the relationship is not perfect, revenue variability tends to increase the more progressive is the income tax system. (There are smaller spheres towards the bottom and larger sphere towards the top).

To round this analysis out, we look at the final variable, the marginal tax rate paid by taxpayers in the highest income tax bracket. After adjusting for the "millionaire's tax" of 1%, California's highest marginal rate is 9.3% for general revenue.[16] The numbers on the chart next to each sphere are the highest tax bracket's marginal tax rate. For Massachusetts, this number is adjusted to include that state's higher tax on capital gains. For similar progressivity of the tax system, the higher the top bracket, the more variable is revenue. Moving from left to right and bottom to top, we find that the spheres become bigger the larger is the progressivity of the tax system. They also become bigger the higher is the highest tax bracket.

RELIANCE ON TOP EARNERS

The striking thing about the volatility analysis is that it is not variability in income per se that is a problem. Colorado, Oklahoma, Massachusetts and New York all have highly variable income. But because they have little to no progressivity and fairly low marginal tax rates, even a 65% reliance on income taxes does not create the kind of budget stress that California experiences. To be sure, these states can have episodes of revenue shortfall. But overall, their tax revenues are much more stable than California's.

Figure 6. Variability of Tax Revenue and Tax Structure—Larger Spheres Correspond to Higher Tax Variability



Author's calculations.
Data Sources: U.S. Department of Census and Federation of Tax Administrators, http://www.taxadmin.org/fta/rate/tax_stru.html

The bottom line here is that California relies heavily on taxing the highest income bracket for its tax revenue, and that bracket has a highly variable income. The reason why incomes are highly variable in California and Massachusetts and, to a lesser extent, the finance-heavy New York and Connecticut, is that these states foster the early stages of companies. They are states with knowledge communities, substantial research and innovation, and a critical mass of scientists, engineers, and entrepreuers. So Google, Yahoo and other internet companies, new propulsion technologies, innovations in medical technology, and the like generate a stream of income which is uneven year to year. It is profits and capital gains which fluctuate substantially and not the income of firefighters or factory workers.[17]

More formally, the variance of income taxes is the sum of the variances of the income taxes from each tax bracket plus the covariances of tax revenues between each pairing of brackets. The structure of the California economy is such that the highest tax bracket imposes levies on the income earners with the highest variance in income. And the covariance between fluctuations in the income of the highest earners and those in lower brackets is relatively small. So the higher the income tax burden on highly-compensated Californians, the worse the volatility problem becomes.

RELIANCE ON INDIVIDUALS WITH VARIABLE INCOMES

California, having decided on a tax structure which, in a state with a highly variable income base, relies most heavily on taxing the portion of that base which is the most variable. The result, not surprisingly, is a highly variable stream of revenue from which to fund state and local expenditures. It is the tax structure—which amplifies the variability of income—that is the root of the "once-a-decade-crisis" in the state's budget.

THE EVOLUTION OF CALIFORNIA'S VOLATILE TAX REVENUE

California has had a progressive income tax system since 1935.[18] Available data on deficits and surpluses (Figure 7) go back only to 1948, but that is sufficient to see the impact of this system on California general fund revenue volatility. Up until 1967, there was no correlation between personal income growth and deficits and surpluses, nor was there a clear relationship with the rate of change of that growth. Personal income would grow and California might have a deficit, but equally likely, it might have a surplus. That situation changed in 1967. Governor Reagan signed into law an increase in the personal income tax rates in 1967 as a way of closing the deficits run during the prior administration of Governor Pat Brown. The tax increase was supposed to be temporary and put into place the most progressive state income tax system in the country. But that shift toward high progressitivity is still reflected in the California tax system.[19]

An examination of changes in real personal income growth (after adjusting for inflation) and actual (ex poste) budget deficits reveals a clear relationship. With three exceptions from 1967 through 2009, every time personal income growth slowed, California ran a deficit. Every time personal income growth increased, California ran a surplus.

The three exceptions include two years when the top marginal tax rate jumped temporarily to 13%, thereby offsetting the potential losses in revenue. And there was one year in which the decrease in personal income growth was very small. What this fiscal history tells us is that the highly progressive income tax system California employs to fund state government is the source of the state's volatility in general fund revenues.

THE INCOME/DEFICIT RELATIONSHIP

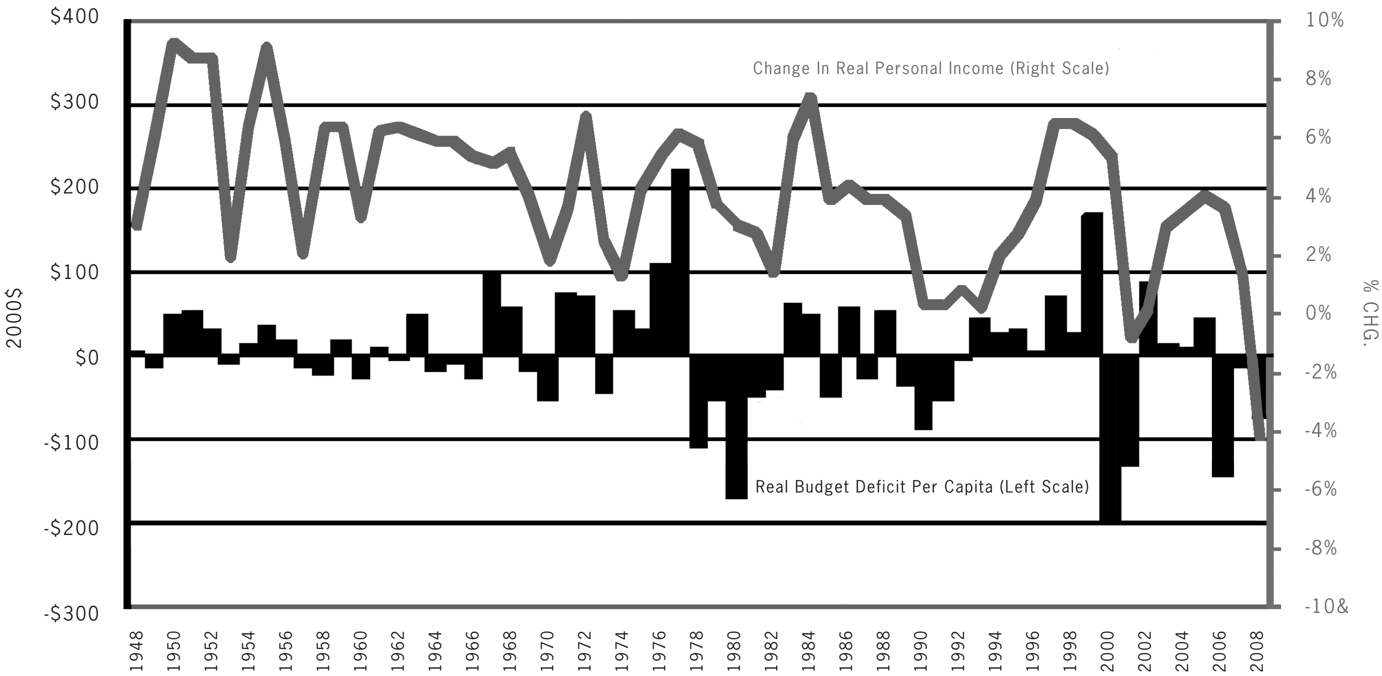
There are two important things to notice about the relationship between the change in the growth of real personal income and *ex poste* deficits. The first is that the passage of Prop 13 did nothing to change the relationship. The deficits after Prop 13 were a little larger, but only because the state chose to increase transfer payments to local governments. In other words, Prop 13 did not change the revenue side of the equation, just the spending decisions.

Second, the deficits are becoming worse. The large deficits of Governor Davis' and Governor Schwarzenegger's administrations are reflective of a changed California economy. Prior to 2000, California was a state that relied heavily on final assembly manufacturing by large companies. The filling in of coastal California's urban centers, the recessions of 1990 and 2001, the opening of trade with China, and the productivity improvements of the past 20 years ended that chapter in California's economic history. As aptly put by Dr. Bruce Yandle of Clemson University:

> *"California's economy continues to be transformed by globalization. Previously prosperous industries are faltering, while new ones flourish. This transformation has been largely driven by the rise of the knowledge economy, in which knowledge is the source of competitiveness. In this new economy it is science, research, technology and innovation which are central to economic prosperity."*[20]

The California of today is one based on knowledge communities, innovation and entrepreneurship. Over 40% of the venture capital invested in the U.S. finds its way to California business.[21] And these businesses, from Google to Tesla and beyond, generate stock options, bonuses, and entrepreneurial profits during good times but not during lean times. So tax revenue

Figure 7. Per Capita California Real Budget Deficit and Change in FY Real Personal Income Based on Author's Calculations:



Data Sources: http://bea.gov/, http://www.dof.ca.gov/budgeting/budget_faqs/information/, http://www.dof.ca.gov/research/demographic/reports/

from the top tier of income earners is now much more variable than in the past as a direct result of the new California economy.[22]

CAPITAL GAINS

In a report on tax revenues, the Legislative Analyst's Office noted that capital gains began to be an increasingly important part of the taxable income base in the late 1990s.[23] There is an aspect of the California budget crisis that is tied up in the spending side, but there is also an important part which is generated by the nature of the tax structure. Thus, regardless of which political party is in power and regardless of what decisions politicians and voters might make about spending, without a change in the way in which California seeks to raise revenues, the amplified crises in revenues will continue.

A closer examination of *ex poste* deficits over the past decade yields a disturbing fact. During the Davis administration, large deficits were blamed on excess spending. After the recall election in 2003, Governor Schwarzenegger along with the legislature crafted a budget to close the gap left by Davis. As officially recorded for a time thereafter, the budget was in surplus. But the surplus was illusory as it involved borrowing, transfers, and one-time measures. But by California's fiscal accounting a seeming surplus appeared. Politicians in Sacramento, although agreeing that reform was needed, wiped their collective brow in a sigh of relief, and continued business as usual until the fiscal crisis reappeared.

In late July 2009, a new budget fix was enacted. The revised budget was in surplus on paper, using Sacramento accounting newspeak. But will the pain experienced have been enough to force reforms in revenue generation? If not, California will have wasted a perfectly good disaster for a second time in the 2000s and can expect a similar crisis in budgeting in the future.

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REFORMING THE TAX SYSTEM: A MODEST PROPOSAL

Even though Prop 13 is clearly not the cause of California's recurrent budget crises, wouldn't elimination of Prop 13 give the legislature more tools to fix the problem? The answer is decidedly no. What Prop 13 does is stabilize the property tax base. With restrictions on the annual increase in assessed property values limited to the rate of inflation or 2%, whichever is lower, most properties in California will not be reassessed upwards to market values during boom times in the housing market. Nor will they be reassessed downward as market values fall during bust times. Under Prop 13, only properties actually sold are reassessed at current market value.

Over long periods, housing will likely appreciate at a rate higher than the rate of inflation and, therefore, higher than the Prop 13 limited increase in assessments. A home is an investment as well as a provider of shelter services. As an investment, it needs to earn an effective inflation-adjusted rate of return (after taking account of tax benefits and depreciation) at least as great as the next best alternative. Prop 13 actually stabilizes the revenue base and is thus a potential solution to California's revenue crises.

RAISING THE PROPERTY TAX RATE

Consider an increase in the property tax mill rate. The current mill rate is at 100 (1% of assessed value). By retaining all of the provisions of Prop 13 with a constitutional amendment permitting an increase in the mill rate we could increase tax revenue and preserve the stability of the tax base. This increase would move the mill rate up to a higher rate, but in the spirit of Prop. 13 prohibit it from rising year to year.

Since the current property tax is a local levy, the added revenue from the rate increase would have to be redirected in some fashion to the state's general fund. The second provision of tax reform would then be to lower income tax rates for each income tax bracket. The combination—increased tax revenue from a more stable base and decreased tax revenues from a less stable base—will decrease the overall volatility of the total tax revenue.

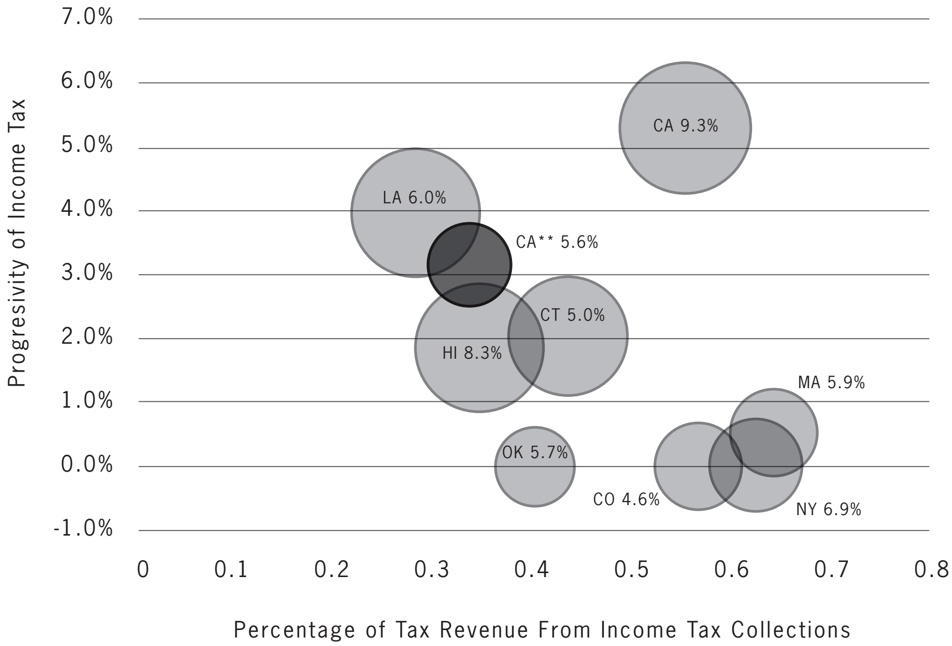
To see the impact of this approach, consider the following exercise. Over the period 1990 to 2006, reduce all income tax brackets by 40%. To compensate for this raise the mill rate for property taxes from 100 to 170 and redirect the added revenue to the state's general fund. Finally, keep all provisions of the tax code including Prop 13 restrictions on assessed value in place.

CHARTING THE RESULT

This simple shift of the source of some of the revenue for the general fund would have had a dramatic effect on the volatility of the taxes throughout the 1990-2006 period. But the shift is revenue neutral in the sense that the aggregate amount of taxes collected in the hypothetical example is virtually identical to the actual tax collected. We can see the results clearly in the volatility analysis of Figure 8.

The volatility of California's general revenue shrinks dramatically (the size of the lined sphere in the chart labeled CA**, relative to the size of the CA sphere in the upper right-hand corner). In fact, due to the stability of the Prop 13 protected annual increases in property tax revenue, the volatility falls much more

Figure 8. Variability of Tax Revenue and Tax Structure—Larger Spheres Correspond to Higher Tax Variability



Author's calculations.
Data Sources: U.S. Department of Census and Federation of Tax Administrators, http://www.taxadmin.org/fta/rate/tax_stru.html

than one would otherwise expect. The hypothetical has California volatility about the magnitude of those states with flat taxes and high income volatility in spite of the fact that California would have retained a progressive, albeit less progressive, income tax system. This simple exercise shows the power of shifting the locus of the tax base away from its current center of gravity and suggests many possibilities for avoiding the recurrent revenue crises which plague California and threaten its ability to govern itself.

CONCLUSION

California's recurrent budget crises have been shown to be a function of the highly progressive income tax system put in place in 1935 and left largely unchanged since modified in 1967. The changes in the California economy—moving from a traditional manufacturing economy to knowledge and service-based economy—have made income tax revenue more volatile. These changes make capital gains, entrepreneurial profits, bonuses and Initial Public Offerings (IPOs) a much more important part of state revenue and a much more volatile source of state revenue.

For California to move away from its legacy of recurrent fiscal crisis, it must address the source of the problem rather than treat the symptoms as they appear. The suggestion here is to transfer the tax burden to a legislated stable source of revenue such as the property tax. That approach is one way to accomplish the goal of reduced volatility without giving up some of the social goals inherent in the state's progressive tax system. There are many ways to impose the kind of stability that Prop 13 provides on potential revenue bases. These alternatives include various kinds of wealth taxes and income-smoothing schemes. However, absent reform—and regardless of the political party in power—a repeat of the Governor Davis/Governor Schwarzenegger budget deficit dance will occur in the future.

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9

RECOVERY IS CERTAIN FOR CALIFORNIA —WHEN IS NOT

CHRISTOPHER THORNBERG

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The year 2009 was rough. The national economy contracted by close to 4% from the second quarter of 2008 to the second quarter of 2009. This was the single worst pullback in GDP over the course of one year since the 1930s. The downturn was led by a 28% decline in business investment, and a 1.7% decline in real consumer spending. But now the recession is over, or so said Newsweek on the cover of its July 27, 2009 edition. Good news indeed as far as it went. In this chapter, we first review the national economic outlook. California is roughly an eighth of the national economy and cannot remain isolated from overall U.S. trends. We then turn to the specifics of the California outlook

It is true that the third quarter of 2009 saw the U.S. expand at a pace in the 3 to 4% range, based on preliminary numbers available at this writing. That was a good number, driven by across the board gains. There were small gains in housing, a surge in consumer durables spending driven by the “cash-for-clunkers” program, government subsidized new car purchases for old-car trade-ins, rationalized by improved gas mileage. There was also a slowing of the inventory burn-off. Business investment spending on equipment and software remained flat, although we continued to see economic losses in non-residential construction. That sure sounded as if the recession was over.

LABOR MARKET LAGS

Unfortunately, the labor markets did not agree that the recession was over—indeed the figures as of fall 2009 remained positively ugly. Unemployment hit 9.8% in September 2009; total job losses to that point came to 7.2 million (-5.2%) since the employment peak hit in December of 2007. But it was hardly surprising that the nation continued to experience the loss of jobs and increasing unemployment. Labor markets are typically lagging indicators, and given the economic turmoil of

the last year it was hardly surprising that we continued to see negative results in these indicators even if the big negative growth figures had come to an end.

MIXED RESULTS IN OTHER MARKETS

Other indicators at this writing showed at best some stabilization—but hardly numbers that seem to imply the US is on the rebound. Instead they painted a picture of an economy stuck in neutral. Data on consumer spending have been mixed lately. Auto sales, which had leapt to over 1.1 million in August as a result of the cash for clunkers program dropped back to below 800,000 on a seasonally-adjusted basis in September. Similarly retail sales apart from autos were still 7% below where they were at their peak in July 2008.

The industrial portion of the economy as of fall 2009 could also be described, at best, tepid. Factory orders, industrial production and exports all showed slight improvements by that time. However, the levels were still considerably lower than what we saw even 18 months earlier and the trends were nothing close to what we might call a rebound. Capacity utilization was still below 70%, the lowest level it had been at since the Federal Reserve started collecting the data. Factory orders, one of the leading indicators of manufacturing production, were up 3% (in nominal dollars) from the trough hit in March 2009, but still were 24% below where they were in July 2008.

The housing market also experienced some stabilization by fall 2009, although here the signs were even more tenuous. Housing starts increased slightly from the record low levels of a few months earlier. Still, the 509,000 unit pace (seasonally-adjusted annual rate) seen in September 2009 remained at a record low for any housing cycle until 2009. The one bit of good news for housing was the increase in home sales seen over the summer of 2009. And with this surge in buyers, prices also started to stabilize. The Case-Shiller home price indexes showed increases in 17 of the 20 local markets tracked, as well as in their national index.

FINANCIAL MARKETS

On the other side of the equation are the figures coming out of the financial markets. Last year—after the collapse of Lehman—the financial markets became completely unglued. Risk spreads went through the roof as multiple financial institutions teetered on the edge of bankruptcy. The nation was warned of an impending economic apocalypse unless extraordinary actions were taken—to the tune of something over $2 trillion and counting at this writing, with little sign that much of this public funding will ever come back to the taxpayer.

How fast things can change! The remaining two major investment banks, JP Morgan and Goldman Sachs, have paid off their federal TARP money and have been posting profit figures that are close to record levels. Taking the cue, the Dow crossed the 10,000 mark in October 2009, even though corporate earnings were still in the tank.

Similarly the debt markets were also calming down by fall 2009. Risk spreads have come down across the board to levels not seen since prior to the first financial cracks that occurred in the third quarter of 2007. The BAA-AAA (high risk – low risk) bond interest-rate spread fell from 340 basis points to only by October 2009. Will the real economy please stand up?

THE REAL ECONOMY OUTLOOK

So what next for the U.S. and California economies? Forecasting is a perilous business at the best of times. We base our assessments by marrying an incomplete understanding of the current economy with lessons from the past that may or may not be analogous to our present circumstances. This process in the context of the slump of 2008 and beyond is made even more difficult by the fact that public policy continues to shift rapidly. However, one thing is for sure; as of fall 2009, the U.S. economy had not yet burned off the excesses that pushed the economy into the downturn in the first place. As such, the economy in 2010 and subsequently will continue to be at best turbulent and at worst stuck in the slump that began in 2008.

This view certainly contradicts the rebound in the financial markets which in turn seemed so out of sync with the more direct measures of economic performance. The standard mantra that continues to echo across the media is that the financial markets are a leading indicator of the economy. Unfortunately, such faith in the ability for the markets to see what mere mortals cannot flies in the face of historical facts. Remember that the markets were bubbling along near all-time highs even after the U.S. economy entered a recession in 2008.

Unfortunately, we—like Ben Bernanke, chairman of the Federal Reserve—are less inclined to believe that the U.S. economy will rebound rapidly in 2010 from the great downturn of 2008-2009. The roots of this downturn did not start with the collapse of Lehman and the financial markets. Thus, a recovery in the financial markets does not imply that the pressures on the real economy are finished.

THE BORROWING BINGE

Instead, the pressure on the financial system was the direct consequence of a massive borrowing and spending binge than began in the U.S. economy back in the mid-1990s. Consumer savings rates dropped from 8% to 1% of disposable incomes, asset values across the spectrum rose to levels completely out of whack with fundamentals (of which housing was only a part). And a massive increase in the use of leverage all created a situation in which the U.S. economy was eventually going to stumble—and stumble hard.

These large imbalances that drove this recession have not been erased. Instead, they have all moved only partially back towards balance. The current growth in the U.S. economy as of late 2009 is largely due to massive fiscal and monetary policy responses. Consider these root problems in turn: real estate, banking, and consumption.

REAL ESTATE

The stability seen in the housing market as of fall 2009 was driven not by fundamentals but by policy decisions. For example, buyers enjoyed record-low interest rates due to the Fed's policy of "quantitative easing." Money was being created and used to buy debt issued by Fannie and Freddie, the two major mortgage lenders that were nationalized. Similarly, the Federal Housing Administration (FHA) expanded its presence in the market during 2009, guaranteeing a record number of mortgages. Lastly, a tax credit was instituted for first-time homebuyers.

All of these programs were set up with a limited lifespan. Chairman Bernanke has to worry about the possible future inflationary pressures created by the expansion of the money supply. The FHA's portfolio

was seeing record increases in delinquencies as of fall 2009. The government may need to reach into its wallet to bailout out this institution as well as its banking counterpart, the Federal Deposit Insurance Corporation (FDIC), to the tune of hundreds of billions of dollars. And even though the housing industry was pushing strongly for an extension of the homebuyer tax benefit, the Obama administration seemed reluctant to extend it due to concerns about the federal budget deficit.

In any case, it is only the last two or three months of such a program that really create the desired result of expanding sales. It is the impending end of such a program that makes it work in the first place! Potential homebuyers rush to take advantage of the program before it expires.

The largest issue, however, is mortgage foreclosures. Although much has been made of the various homeowner rescue plans, they have had little to no impact on the pace of people going into foreclosure. Instead, they have only slowed the process down. According to the Mortgage Bankers Association, the delinquency rate on mortgages rose to 6.4% in the second quarter of 2009, driven largely by the increase in the number of loans that were 90 or more days behind on payments. The second quarter numbers from the Mortgage Bankers Association showed that 5.6% of mortgages were seriously (60 days or more) delinquent on payments, roughly 2.5 million households. The pace of new foreclosures stayed above 1% at the time. A further 4% of mortgages were already into the foreclosure process, but without having finished the process.

The mortgage programs in place have largely failed because they rely on owners being financially ignorant —not realizing that changing the monthly payment without changing the principal balance is hardly helpful when you are 20% "under water," i.e., the mortgage debt exceeds the value of the house. In addition, the programs did very little to change the fact that most mortgage servicers and banks have little incentive to modify the mortgages—the process is expensive and fraught with moral hazard. Only the larger banks have really played ball and this is because they have larger political fish to fry. The big banks wanted to deflect the push for strong re-regulation of the banking sector.

Of course, home sales were up; some homebuyers rushed in to snap up those few bargain deals that have made it onto the market. Yet it is not clear whether the pool of potential buyers will be large enough to handle the mass of foreclosed homes soon to hit the market. That mass will probably total 2 million to 4 million homes over 2010-2012.

THE BANKING SECTOR

In the banking sector, profits were good in the first quarter of 2009—almost $8 billion for the industry as a whole. But this result was largely due to very easy Fed policy and the changes in the Financial Accounting Standards Board (FASB) rules. There is an entire cottage industry forming around helping banks "value" their assets in such a way as to avoid being taken over by the FDIC. And despite these efforts, the news became grim again in the second quarter. According to the FDIC, the banking sector lost $3 billion in the second quarter of 2009 and the number of troubled banks rose above 400.

Papering over a problem does not clean it up. The peak in loan write-downs occurs after a recession has ended. The ratio of loan loss reserves to delinquent loans (the so-called coverage ratio) as of the latest data available at this writing is still vastly too low given that the worst is yet to come. Loan losses were already at a record high in fall 2009, with the overall collapse in asset prices back toward long-run norms.

There will be at least $1 trillion in additional losses the sector will have to absorb before we can truly say the sector is healthy again. Yes, as noted earlier, interest-rate spreads on risky debt have come down—too much in our opinion. It is likely that 2010 will be a record year for defaults and loss ratios are likely going to be steep.

THE CONSUMER

Lastly, we have the consumer, who was largely responsible for the economic meltdown that started in 2008 (not the failure of Lehman Brothers, as is often claimed by various Wall Street executives trying to justify their multibillion-dollar bailouts). Before the economic slump began, personal savings rates were running at an unsustainably low 1% of income, owing to the false sense of wealth created by the 15-year-old national asset bubble. The subsequent decline in U.S. consumer spending is truly historic, setting off the chain reaction that created two of the worst back-to-back quarters for U.S. real growth.

Savings rates grew from 1% to 5% in a fairly short time period. The mirror of the savings deficit, the foreign trade deficit, also closed sharply, with imports plunging even more than exports. This adjustment is exactly what needs to happen in order for the economy to regain proper footing.

But once again, the story is not that clean. Savings in the United States rose from $127 billion to $546 billion (real, seasonally-adjusted annual rate) from the first quarter of 2008 to the second quarter of 2009. This rise would be impressive, given that incomes fell by $250 billion, but in fact only $177 billion of the $800 billion gap between savings and income came from declines in spending—less than one-quarter. It was tax cuts ($460 billion) that comprised most of the change. Some of this decline in the tax stream was due to the progressive nature of taxes that makes the flow hyper-cyclical. The other half was due to the rebate and tax programs put in place at the start of 2009.

What happens in 2010 and beyond when the stimulus tax cuts and rebates go away, along with the Bush tax cuts of 2003? Buyers will once again find themselves with insufficient savings and spending will need to decline again. As for the closing trade deficit, it has been driven by rapid declines in business spending, not by declines in consumer spending. This outcome is neither sustainable nor healthy. Investment must rise and consumer spending must fall. These changes must occur and eventually U.S. public and private spending must fall back in line with reality. But the process will not be easy.

CHANCES FOR A QUICKER RECOVERY

But what of the financial market rebound? Unfortunately it is our opinion that the markets, rather than being a leading indicator, have been no indicator of much of anything. Instead the markets seem to have become largely unhinged from economic reality since the mid-to-late1990s. We saw rapid increases in the equity markets from 1997 to 2000 and from 2003 to 2007 that led to disastrous consequences when these bubbles finally broke.

Little has changed on Wall Street. The incentives, the major players, and the regulatory framework that allowed such excesses all still remain in place. And the growth in asset prices as of this writing seems as contrary to the fundamentals of the economy as ever before. A larger question is why, after two massive bubbles, the American public seems willing to dive back into what seems to be yet another false promise of a bull stock market. Remember that the four most dangerous words in economics are “this time it’s different.”

There are some potential changes in the economy that may lead to better economic outcomes. Asia has turned around faster than most anyone thought, a development particularly significant for California and its international trade gateways. Underlying economic resilience, a smaller reliance on leverage (Asia learned the lesson the US is learning today back in 1997), and strong stimulus efforts by central governments with large reserves have helped Asian economies pull through the large decline in U.S. imports. If the U.S. dollar falls another 10 to 20%, we could see a surge in U.S. exports that would do much to help the economy.

Another potential boost to the economy could come from business spending. In the old economy, business spending followed capacity utilization and profits, in turn driven by consumer spending. Faster depreciation of information technology capital and an overall quicker shift in technological changes could force companies to invest again even if consumer spending remains weak. Again, the operative intuition here is those four most dangerous words in economics: "This time it's different."

Oddly enough, the current rally in the markets can lead to a third outcome, one in which the U.S. economy returns to the unbalanced consumer, asset appreciation-fueled economy of 2004 to 2007. Such an event could cure many problems for the Obama administration in the short run—perhaps even pushing them through the next presidential election. But in the long run, we would still remain on an unsustainable path and the next time the crash will be that much worse.

Isn't there any quick solution the government can put in place? The answer is absolutely not. The U.S. economy can be thought of as a plant that is meant to be carefully pruned to grow in a certain way. However, if the plant is left untended it may grow the wrong way. The gardener may then decide to prune the plant back heavily. But it will still take some time to heal and for growth to occur in the proper direction.

The U.S. economy grew the wrong way from the mid-1990s to 2007, with too much consumer spending and not enough saving, too many imports and not enough exports. Rebuilding the economy around a sustainable path will simply take time. Patience is the word that all American's must learn to appreciate.

THE CALIFORNIA SITUATION

There is little doubt that the Golden State lost some of its luster during 2009. As grim as the national downturn had been, California has was that much worse. Unemployment in the state crossed the 12% mark during 2009, compared to 10% for the nation. This development shouldn't surprise us. The state has always been a boom-bust economy as it is exposed to the cyclical portions of the economy at a greater than normal level.

Figure 1. Unemployment Rates

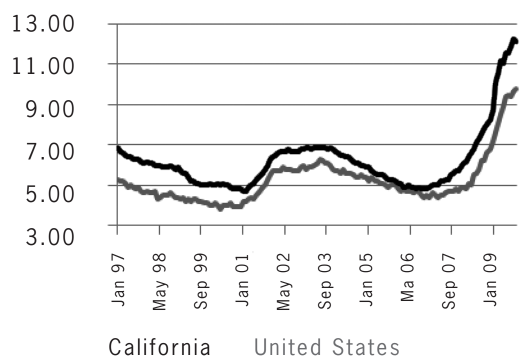
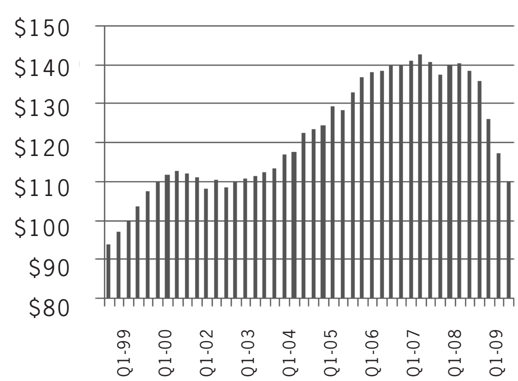


Figure 2. CA Taxable Sales



CYCLICAL VULNERABILITIES OF CALIFORNIA

Take housing. Parts of the state have been rightly characterized as "ground zero" in the housing market meltdown. Nearly 30% of subprime and Alt-A mortgage money generated through the residential mortgage back security markets landed in California, driving prices up more than anywhere else in the nation. There were places in the Inland Empire where well over half of all mortgages were subprime or Alt-A. Price appreciation reflected the excess liquidity; prices in the state nearly tripled between 1998 and 2006. When the crash came, it hit California very hard, as did its impact on consumer spending. Taxable sales in the state were down 22% from the peak as mid-2009.

The state is also heavily dependent on exports—not just of goods but also of services such as licensing (particularly in technology and entertainment) and tourism. The collapse in exports hit the state very hard. Lastly, some portions of the state, particular in the Bay Area, are heavily exposed to swings in business investment. When spending on equipment and software collapsed in the U.S. during 2009, firms in that region suffered.

JOB LOSS

As of September 2009, the state had lost approximately one million jobs or about 6.6% since the peak in 2008, and the losses continue at this writing. To put this loss in perspective, California lost 2.5% of its payroll workforce in the 2001 recession, 2.8% in the recession of1982, and 4.1% in the 1991 downturn.

The Table 1illustrates how the downturn has been reflected inside the state economy. The table shows the changes in employment from June to June for the 2007-2009. The downturn in the state started in 2007, as this year is when the first noticeable slowing of employment occurred. Most sectors were performing normally, but the collapse of the housing bubble hit construction and financial services (primarily mortgage brokers) quite hard.

Figure 3. US Exports (Nominal Index)

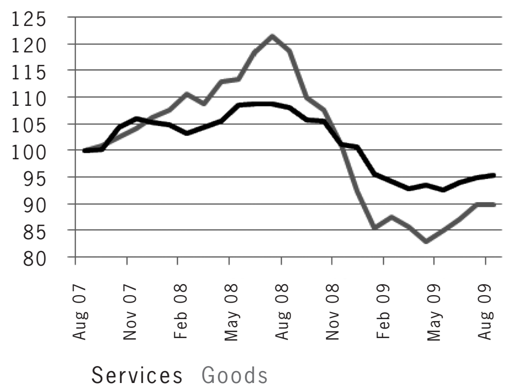


Figure 4. Change in CA Payroll Emplloyment (Smoothed)

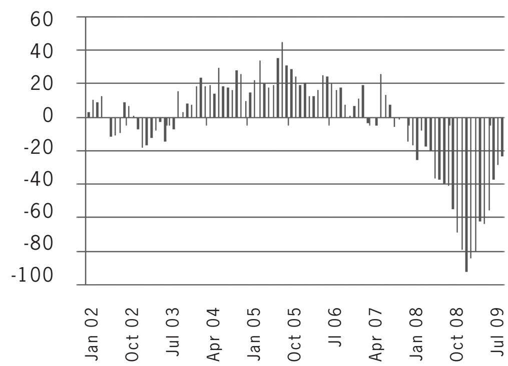


Table 1: California Payroll Employment by Sector

	9-08 to 9-09	9-07 to 9-08	9-04 to 9-07
Total Nonfarm	-732.7	-256.4	210.9
Construction	-144.0	-120.1	5.7
Natural Resources	-2.0	1.7	1.5
Durable Manuf	-96.1	-28.2	-15.3
Non-Durable Manuf	-25.2	-13.8	-5.4
Wholesale Trade	-36.5	-12.1	21.1
Retail Trade	-110.2	-52.3	23.0
Logistics	-25.3	-7.9	8.8
Information	-34.4	2.6	1.3
Finance	-31.1	-46.7	-5.8
Real Estate	-10.7	-8.5	1.8
Prof Sci Tech	-47.9	20.5	46.4
Management	-14.3	-2.1	-7.8
Admin Support	-69.0	-46.4	16.1
Education	-1.3	9.0	9.8
Health Care	13.1	38.5	30.9
Accommodation	-46.7	-5.8	34.8
Arts Entertainment	-4.9	3.6	5.5
Other Services	-17.3	-2.2	3.5
Federal Gov	0.3	1.7	-1.4
State Gov	7.2	-4.6	10.4
Local Gov	-34.3	16.5	26.5

Table 2: Umemployment Rates for Selected Regions

	Sept. 2009	Lowest Rate Before Recession
California	12.2	4.8
East Bay	11.5	4.2
Inland Empire	14.3	4.8
Los Angeles	12.7	4.5
Orange County	9.4	3.3
Sacramento	12.2	4.5
San Diego	10.4	3.9
San Francisco	9.4	3.7
San Jose	12.0	4.3

The second stage of the current downturn was driven by a slowdown in consumer spending. Between 2007 and 2008 the weakness in construction and finance in the state spread to wholesale and retail trade, in addition to administrative services where temporary employment services lie. Then, in the 2009, the downturn shifted to a general economic malaise. Business spending contracted sharply as did exports. Suddenly the job losses shifted to manufacturing, information and profession services. Those local economies that had avoided the worst of the start of the downturn suddenly took a sharp hit. San Jose, for example, saw one of the largest increases in unemployment in the state over the course of 2009, as can be seen on Table 2.

Problems in the consumer economy spilled over into the rest of the state's economy during 2009. Everything from professional services to local government to information jobs, took a hit. The only stable sectors were state and federal employment, and education and health. While at this writing there is still positive job growth in this last category, it has slowed sharply.

SIGNS OF RECOVERY?

When will the state start to pull out of the slide? As of late 2009, the rise in unemployment seemed to slow as did the rate of job loss. Payroll-based employment figures tend to miss turning points because of the methodology used to compile the estimates. So these figures may be overstating the problem. On the other hand, new claims for unemployment insurance remain quite high. Overall, there was a mixed message from labor-market indicators.

REAL ESTATE AND CONSTRUCTION

News from the residential real estate front was slightly better as of late 2009, although there are still problems to work through. The price bubble in California was one of the largest in the nation, with prices rising from a median of $150,000 in 1996 to $300,000 in 2003 to $500,000 in 2006. This era was a time of prosperity for the state. But even so, the increases implied that the ratio of home prices to median homeowner incomes rose from 2.5 to 6. Even with lower interest rates, this situation meant that the proportional costs of owning an average home in the state doubled for the average household—clearly an unsustainable consequence.

There is little mystery as to why California's housing market grew to such unsustainable levels and then was hit so hard. Thirty percent (by value) of all sub-prime and Alt-A mortgages generated in the nation went to buy homes in California. Sadly was evidenced by the massive wave of foreclosures rippling through the state.

There was a surge in home sales in the state in summer 2009. New low prices, along with tax breaks and low interest rates, contributed to the rise in sales. Over the summer, sales in California were up 25% over the previous June. Many of these sales were of foreclosed properties, which is not surprising given the issues in the mortgage markets. Prices suddenly started to rise. The Case-Shiller home price indexes for Los Angeles and San Diego rose modestly. For San Francisco, prices rose even more from the bottom. Median prices for the state were up by 7% from the second to the third quarter of 2009.

But is this recovery real? First, there is the state economy. With unemployment at 12% and rising in 2009, weak wage growth and uncertainty will keep many buyers wary. Second, there is the mortgage market. The three major home finance institutions, Fannie , Freddie, and the FHA, more or less dominated the conforming market during 2009. Yet Fannie and Freddie were propped up by quantitative easing on the part of the Federal Reserve—a strategy that will eventually need to be reversed to prevent inflation. As for the FHA—it has become the new subprime lender with a portfolio that is experiencing rapid increases in delinquencies. When the bailout finally becomes necessary, we can expect that these activities will be curtailed.

Figure 5. Median Home Price

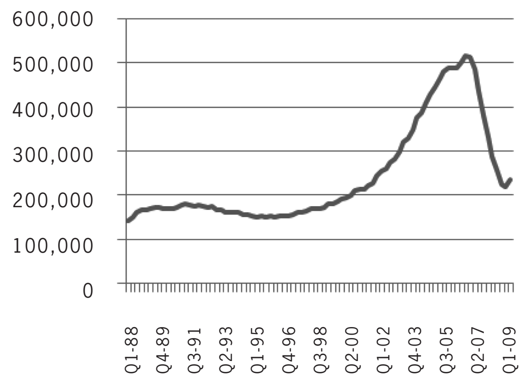
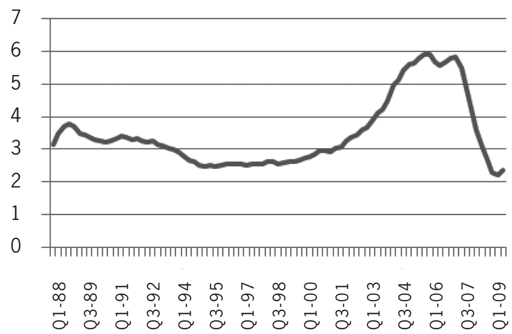


Figure 6. Median Home Price to Median Homeowner Income



FORECLOSURES TO COME

Lastly, the foreclosure crisis is far from over. The pace of foreclosures slowed in the summer of 2009, but this was due more to the moratoriums injected into the process by state regulation rather than any change in the market. According to Dataquick, the number of foreclosures fell from 50,000 to 40,000 (seasonally adjusted) from the fourth quarter of 2008 to the first quarter of 2009, whereas the number of defaults went from 70,000 to 120,000.

Even more startling are the latest data available at this writing from the Mortgage Bankers Association. They show that 9% of all mortgages in California were delinquent on payments and another 6% were somewhere in the foreclosure process. Put another way, 400,000 to 500,000 California households were behind in their payments and most if not all were likely underwater.

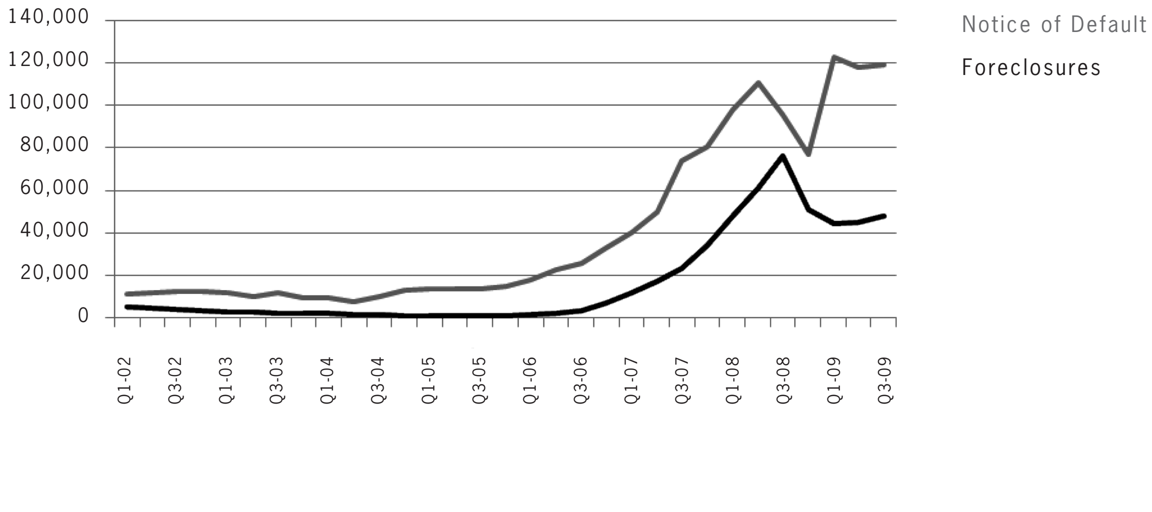
That fact suggests that a large proportion will eventually go into foreclosure and then put onto the market by the bank that held the mortgage. Why hasn't that occurred already? The various homeowner workout plans and moratoriums at the state level have simply bottled the process up. But the wave is coming.

Why haven't the numerous federal and state workout plans been effective? Because all rely on trying to incentivize mortgage services to modify the payment in some way in order to make payments affordable. This approach seems reasonable on the surface, but even a small scratch reveals numerous problems.

First, an owner who is deeply underwater remains underwater even if the monthly payment is reduced. Most owners quickly realize that their credit score will heal faster than their negative equity. Why should they remain in a situation of owing more on a house than it is worth, when they can simply walk away from the liability?

Second, at least at this writing, a large majority of loan modifications have fallen back into default within six months. Lenders are starting to realize that some homeowners view modifications as simply another way of maintaining rent-free housing for another year. Lastly, many mortgage servicers have little financial motivation to spend the financial resources necessary to deal with troubled mortgages on a case-by-case basis. The servicers simply administer the mortgages; they don't actually hold them. Without any financial stake in the results, why hire the massive workforce necessary to address the situation?

Figure 7. NOD's and Foreclosures in California



Another question is why mortgage holders are not being more proactive in simply writing down the outstanding principals on the mortgages. Wouldn't such write-downs be cheaper than going through the foreclosure process? They likely are cheaper, but the potential secondary implications are enormous. Banks are afraid that for every mortgage on which they save cash through such "cram-downs," they will lose on an otherwise whole loan when other owners also request a cram-down. Evidence has shown that a sizable proportion (25%) of mortgages that are delinquent self-heal; that is, they become current without action on the part of the bank. Giving a break to some homeowners would induce others who would not default to stop paying once they hear cram-downs are being actively provided by banks.

As for the non-residential markets, things were similarly grim as of late 2009. The same issue as in residential—easy leverage generating crazy speculation which pushed prices up to unsustainably high level—led to the current crisis. In non-residential, the crisis is quieter, as banks primarily desire is not to acknowledge the financial losses on their loan pool for as long as possible. But the stresses are clear. Vacancy rates were rising as of fall 2009; rents were falling in all major markets, as Table 3 demonstrates.

Figure 8. Non-Residential Permit Values

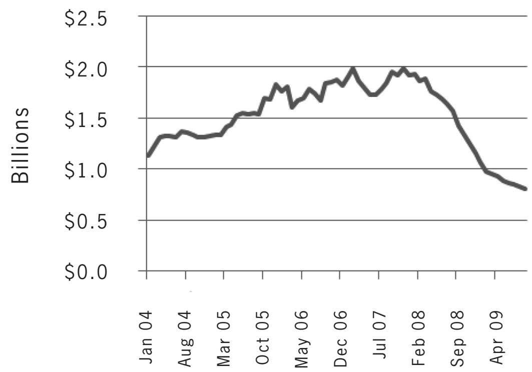


Figure 9. Residential Permits (Units)

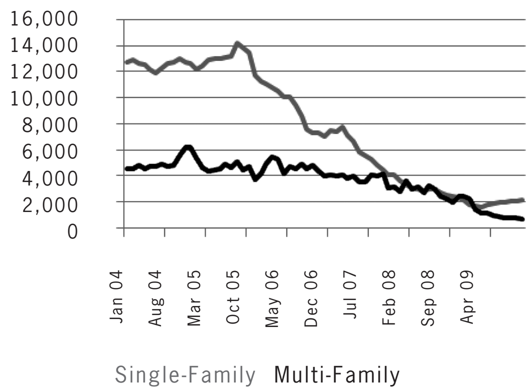


Table 3: Non-Residential Vacancy Rates and Rents

	Vacancy		Asking Rent	
	Q3-07	Q3-09	Q3-07	Q3-09
East Bay	16.9%	20.6%	$26.5	$22.6
Inland Empire	11.3%	27.5%	$22.9	$19.1
Los Angeles	11.7%	17.5%	$31.0	$28.5
Orange County	14.3%	21.1%	$29.6	$24.1
Sacramento	12.8%	19.5%	$22.1	$20.4
San Diego	12.8%	19.6%	$30.1	$26.5
San Francisco	14.2%	19.4%	$35.0	$29.9
San Jose	14.4%	22.2%	$31.3	$29.1

With all these issues, the construction markets remain very weak. Non-residential building permits have fallen over 50% during 2009, and there was little sign of any recovery. Similarly, single family building permits remained around 2000 per month, down from 12,000 to 14,000 per month in 2004 and 2005. Despite the state tax credit for the purchase of new homes, there was little activity in new home construction. The small amount that did occur did help put a few construction workers back on the job. But the small magnitude suggests a highly dubious use of taxpayers' money; the credit basically a bailout for developers.

WILL THE SUNSHINE EVER RETURN?

The big question then for California is whether or when the state will recover in the wake of this sharp downturn. As with past downturns, the state's critics —both internal and externa—have started beating the drum of long-term decline. Much has been made of California's poor business climate in recent years, with some justification. The state is notoriously over-regulated and has leveraged high taxes on certain sectors. Add to this problem the more general issues of governance and it is easy to find reasons to criticize California. At one point in 2009, the Economist entered the fray, with its top U.S. article asking whether Texas would soon replace California as the flagship state of the U.S. economy.

But just as in 2001, the claims of California's demise are highly exaggerated. Clearly the state is in a fair degree of trouble; it has suffered worse than many other places. But it is Beacon Economics' opinion that once this cycle has been worked through, not only will growth return, it will return at a pace that again exceeds the nation overall.

CALIFORNIA'S POTENTIAL

This suggestion may sound Pollyannaish. But consider that California, as hard as it might be to believe, has been one of the growth engines of the U.S. economy over the past decade. Table 4 provides real growth rates for California's economy by sector, relative to the nation overall, from 1997 to 2008. The table is full of surprises. Overall, the state economy outgrew the U.S. economy by one full percentage point annually

Table 4: Annual Growth Rates in Real Economic Output, 1997 to 2008

	California	U.S.
All industry total	3.6%	2.7%
Private industries	3.9%	2.9%
Agriculture	3.3%	3.1%
Mining	-5.6%	-1.1%
Utilities	2.8%	1.7%
Construction	-1.0%	-1.7%
Durable goods	8.6%	4.5%
Nondurable goods	1.3%	-0.4%
Wholesale trade	3.2%	2.8%
Retail trade	5.0%	4.5%
Logistics	2.0%	2.5%
Information	7.9%	6.9%
Finance and insurance	4.7%	4.0%
Real estate and rental	3.5%	2.6%
Professional and technical	5.7%	5.5%
Management of companies	-4.6%	-0.5%
Administrative services	1.1%	2.0%
Educational services	2.9%	2.2%
Health care	3.8%	3.1%
Arts and recreation	2.3%	2.3%
Accommodation and food	3.5%	2.5%
Other services	0.5%	0.3%
Government	1.9%	1.1%

during this period (3.6% versus 2.7%). The state grew faster (or declined slower) than the nation in almost every sector. The state only underperformed relative to national averages in three categories: logistics, administrative services, and management of companies and enterprises. This first sector may be a shock to those who have envisaged the Ports of Los Angeles and Long Beach as large drivers of growth in the economy.

The greatest contributor to growth during this period was durable goods manufacturing, which accounted for almost one-fifth of California's output growth. Manufacturing, particularly in information technology, is doing well despite the decline in jobs. This seeming paradox is explained by the substitution of capital, particularly computerization, for labor. Following manufacturing is real estate (the rental side, not the construction portion of the business), professional services, information, and retail trade.

Real gross state product is not the only place we can see the success of the California economy. Personal income overall and per capita income have been growing faster here than in the nation overall, as have payroll employment and population growth. Why? Many reasons.

The state is ideally located to take advantage of expanding trade with Asia and South America. It has a climate and a landscape that draws tourists and long-term residents to the state. It is home to some of the finest technical schools in the world that spin off many enterprises. And it is the center of two of the most important industries in this digital age: entertainment and information technology.

The past is the past and the future is the future. While we have succeeded well prior to the Great Recession, that fact is no assurance of future growth. To understand this point, we have to consider the nature of the downturn.

ADVERSE SHOCKS

There are two types of changes that can affect the growth of a regional economy. The first is a cyclical hit caused by a temporary pullback or an over-expansion in growth that has been caused by some change in exogenous demand conditions. Once the imbalance works its way through the system, the economy moves back onto a normal long-run trend and begins to grow at a normal pace again.

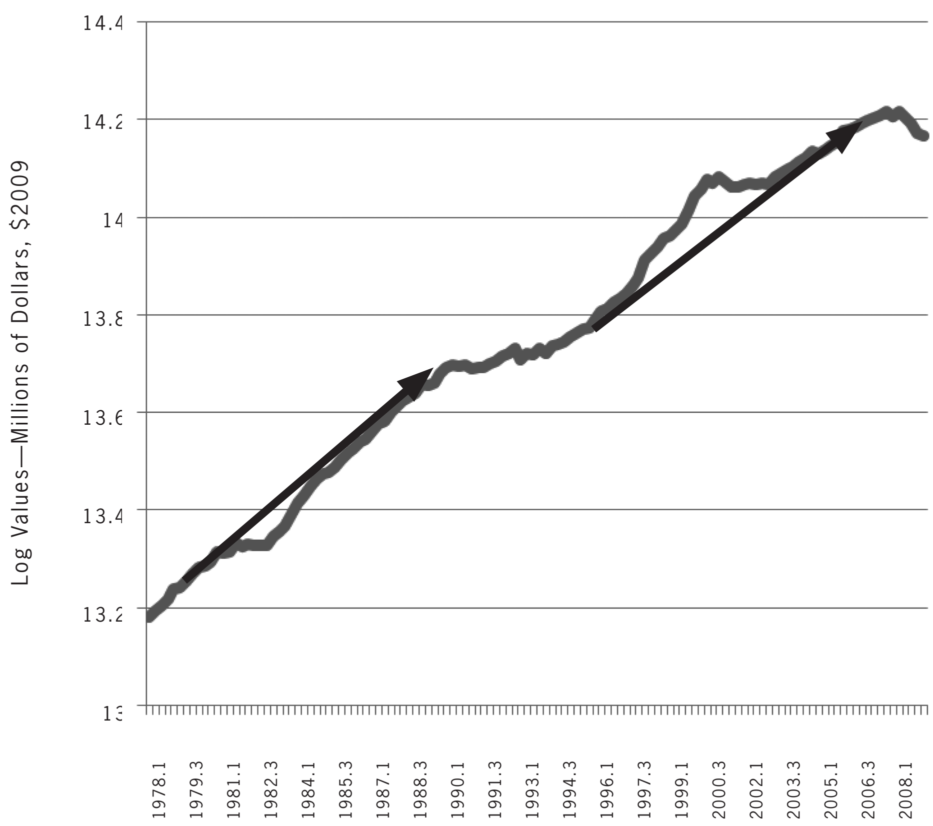
The second type of shock is structural - when an industry that is important to a local economy is permanently downsized. When a structural shock occurs, it can take years for an economy to find steady footing and fill the hole left by the collapsed industry. In short, the long-run trend line is altered.

The 2001 downturn was of the first type. During the late 1990s, a tremendous amount of capital poured into California chasing the pipe dream of the "New Economy." This heated up the state's economy to an unsustainable level, particularly in the San Francisco Bay Area. Unemployment fell to almost zero, as incomes reached ridiculously high levels. It was almost as if there was a new gold rush. Unfortunately, when the gold ran out, the economy went through the typical painful process of withdrawal.

But nothing fundamental had changed in the state. Information technology is still one of the most important growth industries in the world economy and the Bay Area is still the capital of that world. Once things returned to proper levels, growth continued. Most of the "decline" in the state was nothing more than a return to the long-term stable growth path—as can be seen on the chart of real income generated in California.

Similarly, the downturn in the early 1980s was also cyclical, although here it was a negative cycle. The overall U.S. economy contracted and the reduction in demand caused the California economy to suffer losses. But the hit was temporary, and once the recession was over, the economy started to grow again at a rapid pace—until it caught up with its normal long-run growth trend.

Figure 10. Real State Personal Income



A STRUCTURAL SHIFT IN THE EARLY 1990S

In contrast to the downturns in 2001 and the early 1980s, the downturn in 1990 was structural and therefore had long-term consequences for the state. In this case, California experienced the collapse of an important industry—aerospace and defense. Both industries went from being large, in the pre-Reagan years, to becoming even larger during President Reagan's rush to spend the former Soviet Union into defeat.

With the end of the Cold War and the so-called peace dividend, California saw an important part of its economy wither away substantially and suddenly. It took years for growth to return, and when it did, the new trend line was lower. In short, the downturn had an impact that had a permanent effect on the state's long-run growth. A couple of important points need to be made here. First, the unemployment rate in the early 1980s cycle was higher than in the 1990s—higher, in fact, than at any point until the current cycle of today. Unemployment alone does not determine the long-run impact of a downturn on a state. Second, in none of these past downturns was California's normal growth rate affected once recovery had occurred. The claim that long-run growth potential can be stunted by a negative downturn has no basis in historical patterns.

IS THERE A SECOND STRUCTURAL SHIFT?

What kind of downturn is California suffering through today? The state is seeing rough times for a number of reasons. Take construction and real estate. California saw some of the largest increases in home prices and sales activity, along with a secondary positive impact on retail sales. It was hit more than average on the way down; taxable sales in California were down nearly 20% year over year in 2009.

But consumer spending is only one aspect of the downturn. Another feature of this downturn is the collapse in international trade as a result of the worldwide credit crisis and the impact that falling demand from U.S. consumers and businesses is having on the rest of the world. California has the most manufactured exports of any state according to Wiser trade data, and these exports were off—based on data available at this writing- by almost 30% since the start of 2009.

Similarly California, as home to information technology (IT) and a variety of other business equipment manufacturing, is also over-exposed to declines in business investment, which has proportionally and in absolute terms declined even more than consumer spending. Indeed the 2001 downturn, so mild as to almost not be a recession at the national level, hit the Bay Area hard; it was primarily a downturn in business spending.

To put things in perspective, consider the downturn in nominal spending. In 2001, spending on all equipment and software fell by 12.4% from peak to trough, with spending on IT falling just slightly more. This time, overall spending was down by over 20% at this writing and the downturn may not be over. Information technology spending was down 11%, almost as bad as in 2001.

As noted in the national forecast, growth will return to the United States once the major imbalances (too much consumer spending and overvalued assets) work their way out of the system. The same is true for California. But will growth occur from a lower base or will we return to the long-run growth line that began after the 1990s downturn?

While there is little doubt that the current recession is grim, Beacon Economics does not believe that the downturn will have permanent consequences for California. Even though the construction market has been hit hard, the state still has a substantial housing shortage. And there is going to be more demand for that housing since prices in 2009 reached reasonable levels.

International trade is down. But trade will come back once things recover—and with more emphasis on exports than imports. This recovery is important because exports create far more jobs than imports (bringing in crates of consumer products for households in the rest of the country). And while the retail sector is suffering from withdrawal, consumer spending is simply settling to a more sustainable long-run pace.

Some might argue that growth in the state over the past few years was inflated by the real estate boom not unlike the late 1990s, and that we will settle into a lower growth rate at the back end of the downturn. Although real estate certainly stimulated local consumer spending and industry profits, it also hurt the state's business climate because overly expensive homes made the area a costly place to do business. The reverse situation can be expected to balance things out.

Lastly, the state was dealing with another competitive issue - this time foreign rather than domestic. Between 1993, when the bubble began, and 2002, when it reached its peak, the real value of the U.S. dollar rose by 32% compared to the rest of the world. This development was largely a cause of the widening trade gap. And this was not good for California. We are an export-heavy state—both from a goods perspective (particularly in information technology) and a services perspective (tourism and intellectual property licensing). A weak dollar helps California in exporting. From the peak in 2002, the dollar came down slowly for several years. Then the dollar fell sharply in 2007 and early 2008, in response to the credit problems that had yet to expand abroad. The dollar was briefly back in line with its position at the start of the bubble. Although the state felt pressure from internal problems, the dollar decline gave the business sector a big boost. The dollar has since appreciated again, but it almost certainly will have to come back down to close the unsustainable trade gap, giving the state another boost.

REMAINING ISSUES

The state surely has its problems. Politics in Sacramento have become more shrill and partisan; serious policy issues are not being addressed. The state's revenue and expenditure system is broken, and the regulatory system is a mess. California needs significant investments in infrastructure and schools. But these are challenges that can be met.

In the mean time, the state's positive attributes still make it one of the most desirable places to be. If you don't believe me, ask yourself this important question—are you planning on moving away? Add it up and things will be tough in the near future. But it is not time to pack up and move east. The California economy will improve and the state will shine again.

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